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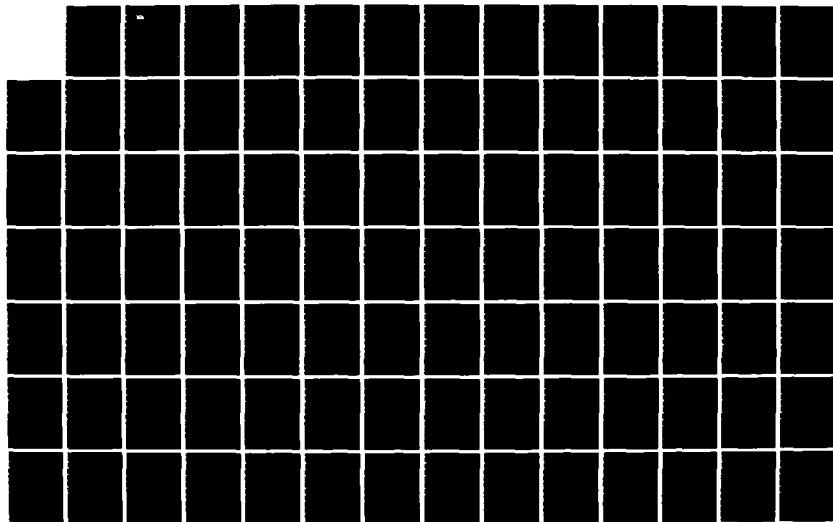
AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS CAREER
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CENTER RANDOLPH AFB TX JUN 84 AFPT-90-328-500

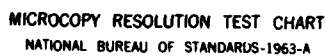
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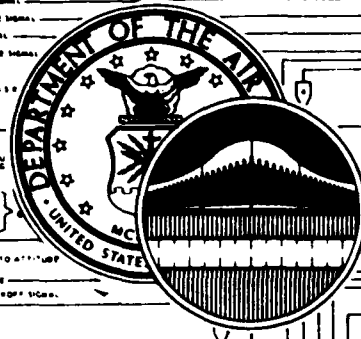
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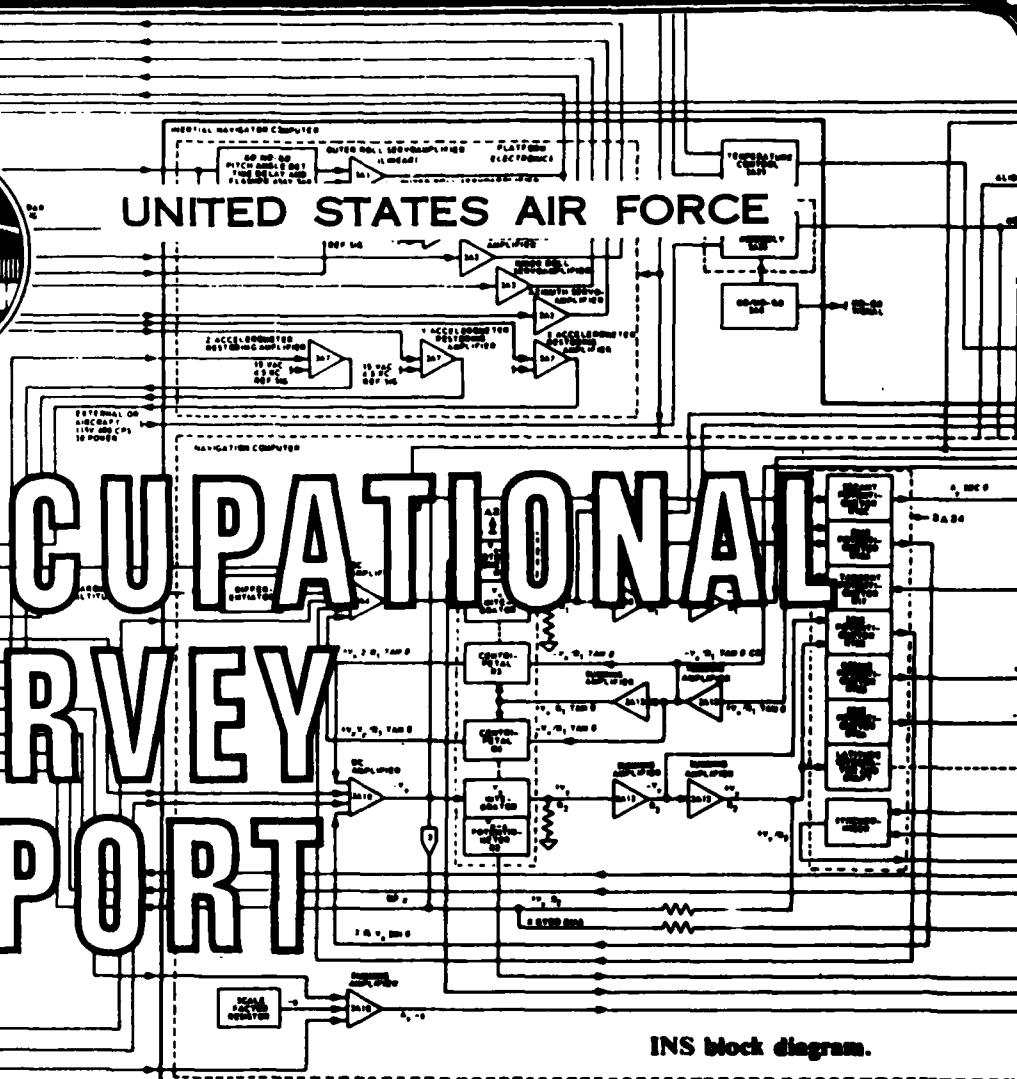




UNITED STATES AIR FORCE

AD-A143 951

OCCUPATIONAL SURVEY REPORT



INS block diagram.

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AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS

CAREER LADDER

AFSC 328X4

AFPT 90-328-500

JUNE 1984

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OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150

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PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Avionic Inertial and Radar Navigation Systems Career Ladder (AFSCs 32834, 32854, 32874). The project was directed by USAF Program Technical Training, Volume II, Section VIII, dated February 1981. Authority for conducting occupational surveys is contained in AFR 35-2. Computer printouts from which this report was produced are available for use by operating and training officials.

The survey instrument was developed by Mr James L. Slovak, Inventory Development Specialist. Dr David E. Williams, Occupational Survey Analyst, analyzed the data and wrote the final report. Sergeant Harold R. Tackett provided computer programming support for the project. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph Air Force Base, Texas 78150.

Copies of this report are distributed to Air Staff sections, major commands, and other interested training and management personnel (see distribution list). Additional copies are available upon request to the USAF Occupational Measurement Center, Attention of the Chief, Occupational Analysis Branch (OMY), Randolph Air Force Base, Texas 78150.

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SUMMARY OF RESULTS

1. Survey Objective: This survey was conducted to acquire data for use in the review and update of the Specialty Training Standards (STS), and to determine the currency of the entry-level training course.
2. Survey Coverage: Job inventory booklets were administered worldwide to 32834, 32854, and 32874 airmen. This sample, which included 77 percent of the total personnel assigned to the specialty, was representative of the career ladders as a whole.
3. Specialty Jobs (Career Ladder Structure): Based on similarity of tasks performed, 328X4 personnel grouped into seven major technical maintenance job groups and two independent job types. Task differences found between job groups were mainly the result of system worked, job specialization, or in-shop or flightline maintenance. Other differences were the result of increased experience level which tended to award greater responsibility including management and supervisory tasks.
4. AFR 39-1 Specialty Description: The AFR 39-1 Specialty Descriptions provide an accurate overview of AFSC 328X4 duties and responsibilities.
5. Career Ladder Progression: The 3- and 5-skill level jobs were technical, with very little supervision and management displayed. DAFSC 32874 airmen, while still performing many of the technical tasks, spent a majority of their time in supervisory and managerial functions. Similar trends were found when examining TAFMS groups.
6. Training Analysis: Lack of agreement among raters on training emphasis rating reflect a lack of any general consensus of first-term training requirements. The 328X4 STS generally was supported by percent performing data. The POI had numerous blocks with no tasks matched and an extensive list of nonreferenced tasks which should be reviewed by training personnel.
7. Implications: The job groups identified in this career ladder reflect a diversified career ladder. Based on survey data, certain areas of the career ladder documents should be reviewed and modified where necessary.

OCCUPATIONAL SURVEY REPORT
AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS
CAREER LADDER
(AFSC 382X4)

INTRODUCTION

This is a report of an occupational survey of the Avionic Inertial and Radar Navigation System Specialty (AFSC 328X4), conducted by the Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB, TX. A previous survey of this specialty was conducted in April 1978.

History

The Avionic Inertial and Radar Navigation Systems career ladder was formerly a part of the Communications-Electronic Systems career field, AFS 30XXX. In April 1971, the ladder was merged into the Avionic Systems career field, AFS 32XXX, and was redesignated as the Avionic Inertial and Radar Navigation Systems career ladder, AFS 328X4, with no significant changes in duties and responsibilities. In 1977, responsibility for maintaining and repairing of forward looking and terrain following radar was removed from this specialty and incorporated into the 328X1 Avionics Navigation System career ladder.

Career Ladder Entry

Personnel entering the Avionic Inertial and Radar Navigation Systems career ladder enter technical school after completing basic military training at Lackland AFB, TX. Initial training for 328X4 personnel is conducted at Keesler Technical Training Center. The basic course (3ABR32834) is a 30.8-week course designed to train new 328X4 personnel in the principles of electronics (18 weeks) and navigation equipment maintenance and repair (12.8 weeks).

Once initial training is completed, 328X4 personnel receive specialized equipment-oriented training at their first assignment. FTD Courses are as follows:

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<u>FTD COURSES</u>	<u>SYSTEMS</u>	<u>HOURS</u>
328X4-000	F-4	120
002	C-141	42
009	C-130	120
014	F-4	56
030	F-4	78
32874ZGW-031	F-4	64
328X4-034	F-4	80
041	KC-135 & B-52	90
046	A-10	35
047	B-52	12
048	KC-135	60
049	KC-10	42
090	C-5	12
091	B-52	120
092	KC-135 & B-52	30
096	C-5	72
102	F-4	123
103	C-130	90
111	KC-135	84
117	KC-135	120
124	C-130	150
126	C-5 & 141	30
125	Carousel IV-E	210
127	C-135	160
065	F-4	66
066	F-4	112

The specific FTD courses are the culmination of the training sequence. Their purpose is to give in-depth training on specific INS systems to be worked on by trainees once they are on the job.

Objective

This project was undertaken to provide data for use in the review and update of the Specialty Training Standard (STS) and to determine job content and present training needs. The survey was requested by HQ ATC/TTQ and Keesler Technical Training Center to determine whether changes to training programs are necessary.

The primary responsibilities of personnel in the 328X4 career ladder, as described by AFR 39-1 Specialty Descriptions, involve inspecting; isolating malfunctions; repairing, maintaining, modifying, removing, installing, and testing avionic inertial and radar navigation equipment and associated test equipment; maintaining inspection and maintenance records; and supervising avionic inertial and radar navigation system personnel.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument used for this occupational survey was USAF Job Inventory AFPT 90-328-500, dated January 1983. A tentative task list was formulated during visits with personnel at Keesler Technical Training Center (KTTC) to include tasks resulting from the use of specialty training standards and other career ladder documents as a guide. The tentative task list was refined and validated by subsequent visits to operational units with 328X4 personnel assigned. From this process, a final inventory consisting of 778 tasks grouped under 22 duty headings was developed.

The 328X4 inventory consisted of three sections: (1) biographical information which included items such as name, SSAN, number of months on current job, and number of months in military service; (2) a background information section which included questions about such items as job satisfaction, equipment used, type of organization, job title, and training courses completed; and (3) a task section listing all tasks performed by career ladder personnel. Respondents first checked the tasks they performed, and then rated each task as compared to all other tasks checked. The rating scale ranged from one (very small amount of time spent) to nine (very large amount of time spent), with a rating of five representing an average amount of time spent performing a task. To determine the relative amount of time spent on each task, all of the individual's ratings were assumed to account for 100 percent of his or her time on the job. The ratings were then summed and each rating was divided by the total number of task responses and multiplied by 100. This procedure provides a basis for comparing tasks, not only in terms of percent members performing, but also in terms of average percent time spent.

Survey Administration

From February 1983 to August 1983, job inventories were administered by local consolidated base personnel offices to all DAFSC 328X4 personnel at the 3-, 5- and 7-skill levels who were eligible to participate in the survey. Members eligible to participate in the survey were selected from Uniform Airman Record (UAR) data tapes generated by the Air Force Human Resources Laboratory (AFHRL).

Task Factor Administration

In addition to completing the job inventory, selected senior 328X4 personnel were also asked to complete a second booklet for either training emphasis (TE), or task difficulty (TD). The TE and TD booklets are processed separately from the job inventories. The rating information is then used in a number of different analyses discussed in more detail within this report.

Task Difficulty. Each individual completing a task difficulty booklet was asked to rate all of the tasks on a 9-point scale (from extremely low to extremely high) as to the relative difficulty of each task in the inventory. Difficulty is defined as the length of time required by the average member to learn to do the task. Task difficulty data were independently collected from 63 experienced 5- or 7-skill level 328X4 personnel stationed worldwide. The interrater reliability (as assessed through components of variance of standardized group means) was .95, indicating high agreement among TD raters. Ratings were adjusted so tasks of average difficulty have ratings of 5.00 and a standard deviation of 1.00. The resulting data is essentially a rank ordering of tasks indicating the degree of difficulty for each task in the inventory.

Job Difficulty Index (JDI). After computing task difficulty for each task item, it was possible to compute a Job Difficulty Index (JDI) for the job groups, when compared to other jobs identified, are more or less difficult. An equation, using number of tasks performed and the average difficulty per unit time spent (ADPUTS) as variables, is the basis for JDI. The index ranges from 1.0 for very easy jobs to 25.0 for very difficult jobs. The indices are adjusted so the average JDI is 13.00. Thus, the more time a group spends on difficult tasks, and the more tasks they perform, the higher the JDI.

Training Emphasis. In addition to the task difficulty ratings mentioned above, a separate set of ratings on the relative emphasis each task should receive in some type of structured training were collected from senior technicians in the field. These training emphasis (TE) ratings use the same task list but ask the rater to first indicate which tasks should be trained for first-enlistment airmen in the specialty, and then to rate the relative emphasis which should be given each task using a 9-point scale that ranged from very little to very heavy emphasis. Training for first-enlistment personnel includes the resident technical training program, field training detachments, mobile training teams, and formal OJT.

TE ratings were collected from 87 senior 32874 personnel, who represented all the major commands who use 328X4 specialists. The interrater agreement among these 84 raters (as assessed through components of variance of standardized group means) was relatively high, but a close examination of the task ratings revealed extremely high variance for many tasks (high task standard deviations from the mean). This finding suggested that further analysis of the ratings was necessary.

A number of different ways were tried to analyze the data; finally, the assistance of the Air Force Human Resources Laboratory (Manpower and Personnel Research Division) was sought, since they are the agency which developed the TE rating technology. AFHRL/MO analyzed the ratings statistically, using both a factor analysis procedure and a clustering of ratings on similar rating patterns. This latter analysis resulted in a hierarchical clustering of raters by their policies and the groups of raters were interpreted in terms of the equipment they are responsible for maintaining (or supervising). For example, one group were MADAR supervisors who rated the MADAR tasks quite highly. Six groups were identified, based on similar

rating policies. A significant proportion of the raters (25 percent), however, grouped on their rating strategy; that is, they were using the rating scale differently than most raters--they used only one value (5 or 9) for the tasks requiring training and zeros (No Training Required) for everything else. Their different rating style introduces so much variance into the set of data as to totally confound the results. If these variant raters were to be discarded (to "clean up" the data), too few raters would remain given the wide variety of equipment systems maintained by this specialty. Thus, we cannot have enough confidence in the quality and accuracy of the 328X4 TE data to release it for use in making critical training decisions. Thus, the training analysis undertaken in this report must be based on task data (percent performing) and task difficulty ratings and will not make use of training emphasis ratings.

Survey Sample

Personnel were selected to participate in this survey to ensure an accurate representation across all MAJCOM and paygrade groups. In this study, all eligible personnel holding DAFSC 328X4, with 3-, 5-, and 7-skill levels, were solicited for their responses. Table 1 reflects the major command distribution of personnel assigned to the 328X4 specialty as of November 1982. Note that MAC, SAC, and the tactical air forces (TAC, PACAF, and USAFE) are the predominate commands, reflecting the relative dispersal of inertial and radar navigation systems across the operational commands. Table 2 reflects the percentage distribution by paygrade. Table 3 reflects the distribution of the survey sample in terms of TAFMS groups. Overall, a representative sample was obtained, with 1,176 (77 percent) respondents sampled from the 1,518 available members of this career field.

Note that about 60 percent of the members of this specialty are E-4 and below and are in their first enlistment (1-48 months TAFMS) (see Tables 2 and 3). This represents a relatively junior maintenance force and training is a very important issue. With such a high proportion of first-enlistment personnel, we can expect that first-termers will be performing most of the jobs in the specialty.

TABLE 1
COMMAND REPRESENTATION OF SAMPLE
(AFSC 328X4)

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
SAC	21	22
USAFE	11	10
ATC	7	6
MAC	29	34
TAC	26	23
PACAF	4	2
AFLC	*	*
AFSC	2	3
AAC	*	*

Total 328X4 Personnel Assigned - 1,740
 Total 328X4 Personnel Eligible for Survey** - 1,518
 Total in Sample - 1,176
 Percent of Assigned in Sample - 68%
 Percent of Eligible in Sample - 77%

* Denotes less than 1 percent
 ** Excludes persons in PCS status, hospital, or less than six weeks on the job

NOTE: Manning figures as of November 1982

TABLE 2
PAYGRADE DISTRIBUTION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AIRMEN	47	49
E-4	16	17
E-5	20	18
E-6 & E-7	17	16

* Does not reflect 9-skill level personnel

NOTE: Manning figures are as of November 1982

TABLE 3
TAFMS DISTRIBUTION SAMPLE

	<u>MONTHS TOTAL ACTIVE FEDERAL MILITARY SERVICE</u>					
	<u>1-48</u>	<u>49-96</u>	<u>97-144</u>	<u>145-192</u>	<u>193-240</u>	<u>241+</u>
NUMBER ASSIGNED	1,029	281	157	142	104	27
NUMBER IN SAMPLE	689	179	138	66	79	22
PERCENT OF TOTAL SAMPLE	58%	15%	12%	6%	7%	2%
PERCENT OF TOTAL ASSIGNED	59%	16%	9%	8%	6%	2%

SPECIALTY JOBS

One of the most important functions of an occupational survey is to examine the variety of jobs in the career ladder on the basis of what people are actually doing in the field, rather than how official career ladder documents say they are employed. The analysis of actual job structure is made possible by the use of the Comprehensive Occupational Data Analysis Program (CODAP). By using CODAP, job functions are identified on the basis of similarity in tasks performed and relative time spent performing the tasks.

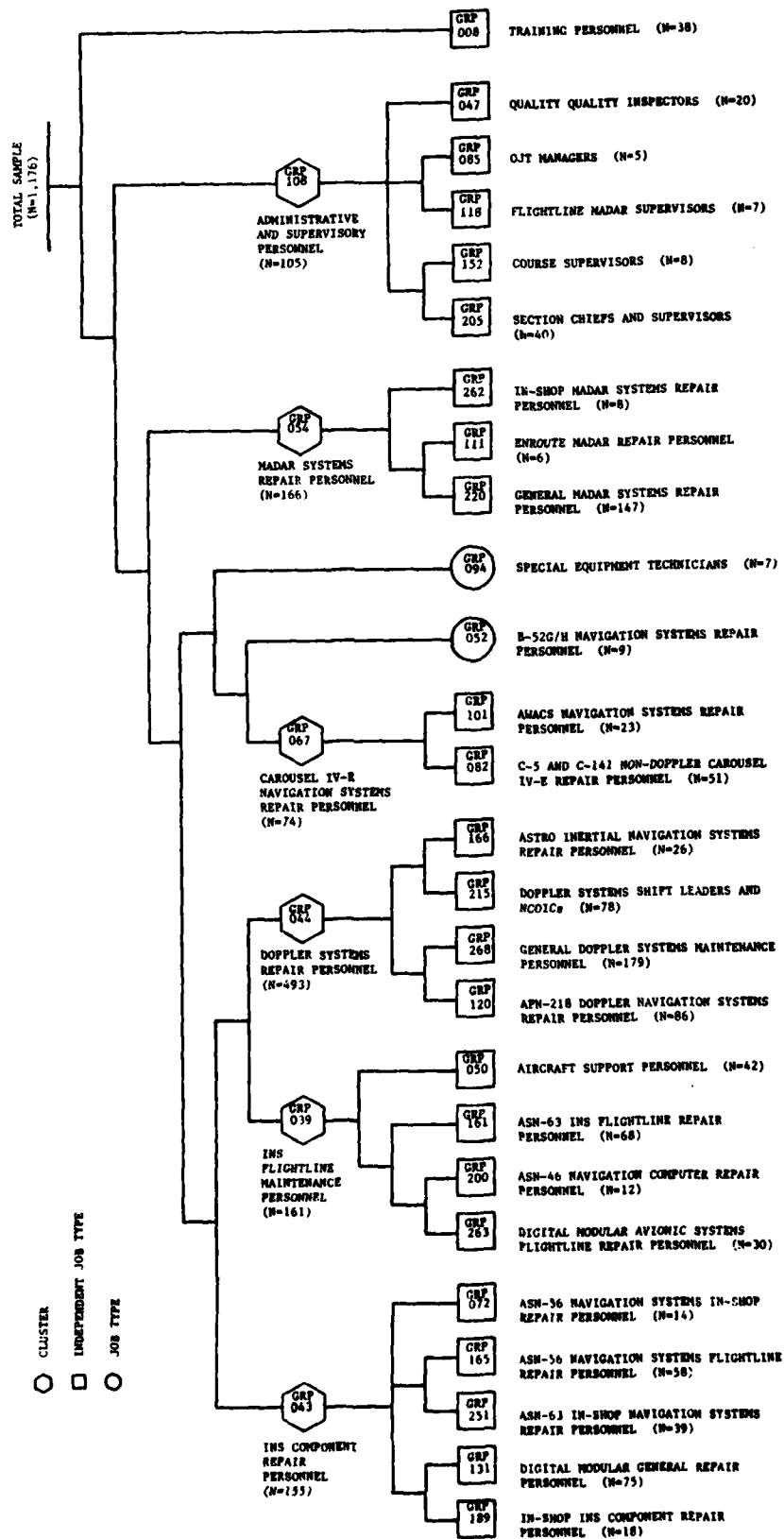
The specialty structure analysis process consists of determining the functional job structure of career ladder personnel in terms of job types, clusters, and independent job types. A job type is a group of individuals who perform many of the same tasks and also spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as clusters. Finally, there are often cases of specialized job types too dissimilar to be grouped into any cluster. These unique groups are labeled independent job types.

Specialty Structure Overview

The job structure of the Avionic Inertial and Radar Navigation Systems career ladder was determined by performing a job type analysis of the 1,176 survey respondents. Based on task similarity and the amount of time spent performing each task, the jobs performed by 328X4 personnel separated into 26 job groups; all but 3 of which grouped into 6 functional clusters. The three remaining job groups were independent job types that included Technical Training Instructors, Special Equipment Technicians, and B-52G/H Navigation Systems Personnel. Although most jobs performed formed into six clusters, no one technical duty area made up a majority of a job incumbent's time in any cluster group. Rather, job time was spread over several technical areas, with the mix of duties and amount of time spent varying considerably among the 328X4 Personnel surveyed. Job diversity is rather great among Avionic Inertial and Radar Navigation Systems Personnel. This marked diversity is associated with some very specialized jobs (Special Equipment Technicians, B-52 Repair Personnel, MADAR, and Training Personnel) and the mission or specific aircraft requirements of Tactical Air Forces versus Strategic and Airlift Forces (TAF, SAC, and MAC). The job groups found within this survey are listed below and illustrated in Figure 1. The group (GRP) number shown beside each title is a reference to computer printouts provided to selected users. The letter "N" stands for the number of people in the group*.

* The N for a cluster will not always equal the sum of the groups within it.

FIGURE 1
CAREER LADDER STRUCTURE
(AFSC 328X4)



- I. INERTIAL NAVIGATION SYSTEMS (INS) COMPONENT REPAIR CLUSTER (GRP043, N=155)
 - A. In-Shop INS Component Repair Personnel (GRP189, N=18)
 - B. Digital Modular General Repair Personnel (GRP131, N=75)
 - C. ASN-63 In-Shop Navigation Systems Repair Personnel (GRP251, N=39)
 - D. ASN-56 Navigation Systems Flightline Repair Personnel (GRP165, N=58)
 - E. ASN-56 Navigation Systems In-Shop Repair Personnel (GRP072, N=14)
- II. INS FLIGHTLINE MAINTENANCE PERSONNEL CLUSTER (GRP039, N=161)
 - A. Digital Modular Avionic Systems Flightline Repair Personnel (GRP263, N=30)
 - B. ASN-46 Navigation Computer Repair Personnel (GRP200, N=12)
 - C. ASN-63 INS Flightline Repair Personnel (GRP161, N=68)
 - D. Aircraft Support Personnel (GRP050, N=42)
- III. DOPPLER SYSTEMS REPAIR PERSONNEL (GRP044, N=493)
 - A. APN-218 Doppler Navigation Systems Repair Personnel (GRP120, N=86)
 - B. General Doppler Systems Maintenance Personnel (GRP268, N=179)
 - C. Doppler Systems Shift Leaders and NCOICs (GRP215, N=78)
 - D. Astro Inertial Navigation Systems Repair Personnel (GRP166, N=26)
- IV. CAROUSEL IV-E NAVIGATION SYSTEMS REPAIR CLUSTER (GRP067, N=74)
 - A. C-5 and C-141 Non-Doppler Carousel IV-E Repair Personnel (GRP082, N=51)
 - B. AWACS Navigation Systems Repair Personnel (GRP101, N=23)
- V. B-52G/H NAVIGATION SYSTEMS REPAIR PERSONNEL (GRP052, N=9)
- VI. SPECIAL EQUIPMENT TECHNICIANS (GRP094, N=7)
- VII. MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS REPAIR CLUSTER (GRP054, N=166)
 - A. General MADAR Systems Repair Personnel (GRP220, N=147)
 - B. Enroute MADAR Systems Repair Personnel (GRP111, N=6)
 - C. In-Shop MADAR Systems Repair Personnel (GRP262, N=8)
- VIII. ADMINISTRATIVE AND SUPERVISORY CLUSTER (GRP018, N=105)
 - A. Section Chiefs and Supervisors (GRP205, N=40)
 - B. Course Supervisors (GRP152, N=8)
 - C. Flightline MADAR Supervisors (GRP118, N=7)

- D. OJT Managers (GRP085, N=5)
- E. Quality Control Inspectors (GRP047, N=20)

IX. TRAINING PERSONNEL (GRP008, N=38)

The respondents forming these groups accounted for 92 percent of the survey sample. The remaining 8 percent represented personnel who perform unique jobs or were not distinguishable when two or more large clusters merged.

Job Descriptions

Presented on the following pages are descriptions of each job listed in Figure 1. The information presented is limited to a brief description of the respondents who comprised the job groups and examples of tasks performed which indicate the nature of their jobs. A more extensive list of tasks performed by each group is provided in Appendix A.

I. INERTIAL NAVIGATION SYSTEMS (INS) COMPONENT REPAIR CLUSTER (GRP043, N=155). This cluster contains 155 airmen, or 13 percent of the survey sample. These personnel spend a majority of their time in the day-to-day maintenance and repair of Avionic Navigation Systems primarily in the tactical air forces (TAF), with a few in AF Systems Command. Characteristically, members of this cluster are 3- and 5-skill level personnel performing tasks involving the inspection, maintenance, and repair of avionic inertial and radar navigation systems. Seventy-eight percent of their work time was spent performing technical tasks. Various combinations of on-equipment and off-equipment functions were performed by subgroups of these personnel. This cluster contains five different kinds of jobs as discussed below.

A. In-Shop INS Component Repair Personnel (GRP189, N=18). The members of this group spent a majority (55 percent) of their job time in the performance of off-equipment or in-shop maintenance of inertial navigation systems. Seventy-eight percent of these members are assigned to TAC, 17 percent to USAFE, and 5 percent to PACAF. Approximately 94 percent of this group work on ARN-101 navigation systems, 11 percent work on ASN-48 navigation systems, 50 percent work on ASN-56 navigation systems and 55 percent work on ASN-63 navigation systems. Representative tasks performed included:

- isolate malfunctions to inertial computer SRU
- align inertial platforms
- bench check inertial platforms
- remove or replace DMAS IMU SRU
- bench check general purpose or navigation computers
- bench check WRCS computers
- isolate malfunctions to inertial reference unit/
inertial platform SRU

align inertial computers
bench check output signal distribution units
reprogram IMU

These members have an average grade of E-3, and average only 29 months in service. A majority (78 percent) indicated their jobs were interesting.

B. Digital Modular General Repair Personnel (GRP131, N=75). These 75 personnel work primarily on the digital modular avionic systems for both on- and off-equipment. Members are generally in grade E-4, with an average of 69 months in service. They perform an average of 189 tasks. Common tasks included:

calibrate IMU
bench check IMU
remove or replace IMU
perform DMAS functional checkouts
bench check DMAS computers
bench check DMAS SDC
verify programs in DMAS computer
perform IMU auto-calibrations
isolate malfunctions to DMAS SDC
isolate malfunction to IMU

A majority (77 percent) of these personnel were assigned to three major commands: 39 percent to USAFE, 38 percent to TAC, and 18 percent to AFSC.

C. ASN-63 In-Shop Navigation Systems Repair Personnel (GRP251, N=39). These personnel primarily are responsible for repairing and maintaining the ASN-63 computers. Most of their job time is spent in an in-shop environment. These personnel have an average grade of E-4 and perform an average of 126 tasks. Common tasks include:

bench check inertial platforms
bench check inertial computers
isolate malfunctions to inertial computer SRU
isolate malfunctions to inertial platform SRU
align inertial platforms
align inertial computers
bench check WRCS computer
bench check output signal distribution units
bench check general purpose navigational computer
amplifiers
perform gyro bias calibrations

Seventy-seven percent of these personnel are assigned to TAC. Generally, these members indicated their job was interesting and made wide use of their talents and training; only 44 percent, however, indicated they would reenlist.

D. ASN-56 Navigation Systems Flightline Repair Personnel (GRP165, N=58). This small group of respondents work primarily on the ASN-56 navigation system and work mostly in a flightline environment. They do, however, perform both on- and off-equipment functions. These members have an average grade of E-3, 36 months in military service, and perform an average of 89 tasks. Common tasks include:

- isolate malfunctions to inertial computers
- isolate malfunctions to inertial platforms
- isolate malfunctions to inertial platform SRU
- isolate malfunctions to general purpose or navigational computer SRU
- operationally check inertial systems
- operationally check general purpose or navigational computer systems
- operate inertial and radar navigational equipment for checkout of associated avionic systems
- bench check inertial computers
- remove or replace inertial computers
- remove or replace inertial platforms
- align inertial computers

E. ASN-56 Navigation Systems In-Shop Repair Personnel (GRP072, N=14). These personnel work mainly on the ASN-56 navigation system. Most of their work is performed in-shop. Forty-three percent of these members are in their first enlistment. They have an average of 61 months in military service and perform an average of 72 tasks. Common tasks included:

- bench check inertial computers
- bench check general purpose or navigational computers
- isolate malfunctions to general purpose or navigational computer SRU
- isolate malfunctions to inertial computer SRU
- align general purpose or navigational computers
- bench check inertial platforms
- align inertial platforms
- remove or replace general purpose navigational computer SRU
- perform gyro bias calibrations
- bench check reconnaissance adapter units

Most of these personnel (86 percent) are assigned to TAC and the remaining personnel are assigned to PACAF.

II. INS FLIGHTLINE MAINTENANCE PERSONNEL CLUSTER (GRP039, N=161). This cluster contains 161 personnel, or 14 percent of the total survey sample. These personnel spend a majority of their time in day-to-day flightline maintenance and repair of avionic navigation systems. Characteristically, members of this cluster are 3- and 5-skill level personnel performing tasks related to the maintenance and repair of specific types of avionic inertial radar navigation systems in a flightline setting. This cluster contains four different kinds of jobs, as discussed below.

A. Digital Modulator Avionic Systems Flightline Repair Personnel (GRP263, N=30). Members of this group primarily are responsible for flightline maintenance on digital modulator avionic systems (ARN-101). Although some members of this group spend small amounts of time on the ASN-48 and ASN-63 systems, their tasks relate mainly to the ARN-101 systems. Approximately 90 percent of these members' job time was spent on duties related to on-equipment repair. Eighty-three percent of these personnel are assigned to TAC, 13 percent to USAFE, and 4 percent to PACAF. Personnel have an average grade of E-4, with an average of 49 months in service and perform an average of 84 tasks. Common tasks include:

- operationally check DMAS
- perform DMAS functional checkouts
- isolate malfunctions to IMU
- remove or replace DMAS computers
- isolate malfunctions to DMAS computers
- isolate malfunctions to DMAS signal data converter (SDC)
- perform IMU auto-calibrations
- remove or replace DMAS IMUB
- perform DMAS weapons delivery checkouts

B. ASN-46 Navigation Computer Repair Personnel (GRP200, N=12). These personnel work primarily on ASN-46 navigational systems computers. A majority of their time was spent on on-equipment repair. All of these personnel are in their first enlistment. Their average grade is E-3 and they perform an average of 70 tasks. Common tasks include:

- operationally check general purpose navigational computer systems
- operationally check inertial systems
- remove or replace inertial computers
- remove or replace inertial platforms
- isolate malfunctions to general purpose navigational computers
- isolate malfunctions to inertial platforms
- isolate malfunctions to inertial computers
- isolate malfunctions to output signal distribution units
- remove or replace heading computers
- remove or replace general purpose or navigational amplifiers

Only 50 percent of these members indicated their job was interesting and made adequate use of their talents and training (versus 70 to 80 percent for most groups).

C. ASN-63 INS Flightline Repair Personnel (GRP161, N=68). These 68 members basically are responsible for flightline maintenance and repair of ASN-63 INS systems. The average grade of these members is E-3, with an average of 55 months TAFMS. They perform an average of 70 tasks. Common tasks included:

- operationally check inertial systems
- operationally check WRCS systems
- remove or replace inertial platforms
- remove or replace inertial computers
- remove or replace inertial WRCS computer controls
- remove or replace output signal distribution units
- isolate malfunctions to inertial computers
- isolate malfunctions to WRCS computers
- isolate malfunctions to WRCS computer controls
- isolate malfunctions to output signal distribution units

D. Aircraft Support Personnel (GRP050, N=42). These personnel spent some of their job time working on INS and performing avionic inertial and doppler radar navigational general maintenance. Primarily they performed aircraft support functions. The majority (63 percent) of these members are in their first enlistment. Their average grade is E-4 and they perform an average of only 35 tasks. Tasks included:

- operationally check inertial systems
- launch or recover aircraft
- remove or replace INU
- tow aircraft
- secure or safety LRU in aircraft
- service aircraft with hydraulic fluid, air, or oil
- perform preventive maintenance on inertial and doppler navigation systems
- assist in removing or replacing aircraft mechanical systems
- assist other avionic specialists in repair of other avionic systems
- remove or install access panels

Seventy-three percent of these personnel are assigned to TAC or USAFE. Only 53 percent indicated their job is interesting; slightly more than 60 percent indicated their training and talents are not well utilized, which may suggest major morale problems in this group.

III. DOPPLER SYSTEMS REPAIR PERSONNEL (GRP044, N=493). This cluster, the largest of the clusters discussed, contains 493 airmen, or 42 percent of the survey sample. The majority of these personnel are assigned to SAC, MAC, and TAC. The primary responsibility of cluster personnel involves the repair and maintenance of the Doppler Navigational Systems (DNS) and associated equipment. Characteristically, members of this group are 3-, 5- and 7-skill level personnel performing tasks involving the inspection, maintenance, and repair of the doppler navigation systems. Similar amounts of job time are devoted to on- and off-equipment functions. This cluster contains four different jobs, as discussed below.

A. APN-218 Doppler Navigation Systems Repair Personnel (GRP120, N=86). This group contains doppler repair personnel who work primarily on the APN-218 doppler navigation systems. Although a few members of this group indicated they did limited work on other systems, the tasks they performed were related mainly to the APN-218 systems. Eighty-eight percent of these members hold either DAFSC 32834 or 32854, and 78 percent are in their first enlistment. The majority (88 percent) are assigned to SAC, they have an average grade of E-4, and perform an average of 96 tasks. These personnel work on both on- and off-equipment. Tasks representative of this group include:

- remove or replace battery units
- remove or replace control or display units
- remove or replace IMU
- remove or replace doppler navigational computers
- perform preventive maintenance on inertial and doppler navigation systems
- operationally check doppler navigational computer systems
- operationally check doppler sensor systems
- isolate malfunctions to inertial navigation units
- isolate malfunctions to relays
- isolate malfunctions to carousel IV-E relays, annunciators or switchers

B. General Doppler Systems Maintenance Personnel (GRP268, N=179). Members of this group typically worked on more than one doppler system. The two doppler systems most commonly worked on were the ARN-218 and ARN-147. The adverse weather aerial delivery systems (AWADS) system was also maintained by some members of this group. Duties and tasks performed primarily involved C-130 and KC-135 aircraft. These personnel worked on both on- and off-equipment. Seventy percent of these individuals are in their first enlistment, with an average grade of E-4. They perform an average of 153 tasks. Representative tasks include:

- bench check doppler sensor frequency trackers
- bench check doppler sensor RT

- bench check doppler sensor antennas
- isolate malfunctions to doppler systems receiver-transmitter (RT)
- isolate malfunctions to doppler sensor frequency trackers
- isolate malfunctions to doppler navigational computers
- align doppler sensor frequency trackers
- align doppler sensor RT
- operationally check doppler sensor systems
- operationally check doppler navigational computer systems

C. Doppler Systems Shift Leaders and NCOs (GRP215, N=78). This is a highly experienced group, with 90 percent holding 5- or 7-skill levels. They perform one of the broadest job of all groups described (average of 206 tasks) and have an average of 111 months TAFMS. These personnel perform both on- and off-equipment repairs and are involved primarily with maintenance of doppler equipment, as well as supervision of personnel. Representative tasks included:

- provide technical assistance for job-related problems encountered by subordinates
- supervise Apprentice Avionic Inertial and Radar Navigation Systems Specialists (AFSC 32834)
- conduct OJT
- demonstrate operation of equipment
- isolate malfunctions to associated aircraft equipment
- operationally check INS

D. Astro Inertial Navigation Systems Repair Personnel (GRP166, N=26). All 26 of these respondents are assigned to SAC in support of SR-71 or U2/TR-1 systems. Part of the function of these members is classified. Generally, they work with the Astro INS. Characteristically, these personnel have an average grade of E-4 and perform an average of 128 tasks. Common tasks include:

- perform SR-71 or U2/TR-1 mission configuration
- remove or replace chronometers
- remove or replace control and display units (CDU)
- remove or replace battery units (BU)
- bench check astro inertial units
- align astro inertial units
- bench check chronometers
- operationally check inertial systems
- inspect computer maintenance panels (NSA-14V2)
- inspect system temperature and voltage monitor (NSA-14V2)

IV. CAROUSEL IV-E NAVIGATION SYSTEMS REPAIR CLUSTER (GRP067, N=74). This small cluster contains 74 airmen. The primary responsibility of personnel in this cluster involves repairing and maintaining the Carousel IV-E Navigation Systems in both shop and flightline locations. Personnel in this cluster perform an average of 82 tasks. These personnel are assigned to both MAC and TAC. Most of these personnel hold the 3- and 5-skill level (36 percent and 45 percent, respectively). Overall, 75 percent report their job as interesting and their talents and training are well utilized.

Within this cluster, there are two job types:

A. C-5 and C-141 Non-Doppler Carousel IV-E Repair Personnel (GRP082, N=51). A majority (92 percent) of this job group are assigned to MAC, with others being in ATC. These personnel primarily are responsible for maintaining and repairing the Carousel IV-E System on the C-5 and C-141 aircraft. These personnel have an average grade of E-4 and 69 percent are in their first enlistment. They are involved with both on- and off-equipment maintenance and perform an average of 85 tasks. Representative tasks included:

- remove or replace minor hardware on LRU, test sets
or mockups, such as knobs or lamps
- remove or replace control and display units (CDU)
- remove or replace ledex relays
- remove or replace navigational select panels upper
switch assemblies
- remove or replace relays
- operationally check inertial systems
- isolate malfunctions to navigation course select panel
or navigation selector panel (NSP)
- isolate malfunctions to ledex relays
- operationally check INS interface with associated
equipment other than DMAS

B. AWACS Navigation Systems Repair Personnel (GRP101, N=23). Twenty-one of these 23 members are assigned to TAC and are responsible for maintaining and repairing AWACS Navigation Systems. The average grade of these individuals is E-4, with an average of 61 months TAFMS. They perform an average of 76 tasks. Common tasks include:

- operationally check inertial systems
- operationally check Omega systems
- isolate malfunctions to Omega receiver computers
- isolate malfunctions to inertial navigation units (INU)
- isolate malfunctions to associated aircraft equipment
- isolate malfunctions to Omega systems or associated
avionic systems
- launch or recover aircraft
- isolate malfunctions to Omega mode select units
- reprogram Omega systems

V. B-52G/H NAVIGATION SYSTEMS REPAIR PERSONNEL (GRP052, N=9). These personnel are assigned to SAC. They perform a specialized mission which involves older B-52G/H aircraft. They are primarily responsible for the day-to-day maintenance and repair of the navigation equipment aboard the aforementioned aircraft. They work on both on- and off-equipment. These personnel have an average grade of E-3, 89 percent are in their first enlistment, and they perform an average of only 49 tasks. Common tasks include:

- remove or replace IMU
- remove or replace doppler navigational computers
- remove or replace battery units (BU)
- remove or install access panel
- remove or replace doppler sensor frequency trackers
- operationally check doppler navigational computer systems
- operationally check inertial systems
- bench check doppler navigation computers
- reprogram INS digital computers
- isolate malfunction to inertial navigational units (INU)

These personnel are fairly inexperienced, having an average of only 24 months in service. Although they indicated their jobs are interesting and talents and training are adequately utilized, only 44 percent say they will reenlist.

VI. SPECIAL EQUIPMENT TECHNICIANS (GRP094, N=7). These personnel are assigned to TAC, SAC, MAC, and ATC. They perform a specialized function which involves calibration of systems performance test sets. Calibration of the systems performance test sets require special training which is conducted at Kelly AFB for selected airmen. The job of these respondents include routine INS tasks and tasks related to the specialized function mentioned above. Four of these group members are 7-skill level, with two individuals holding 3- and 5-skill levels. The average grade is E-4, with an average of 103 months in service. They perform the broadest job of all groups described (average of 666 tasks). Common tasks included:

- calibrate systems performance test sets (SPTS)
- calibrate microwave test fixtures
- secure or safety LRU in aircraft
- operate power AGE
- perform marriage adjustments of installed LRU
- remove or replace INU
- implement precision measuring equipment monitoring procedures
- maintain precision measuring equipment laboratory test equipment schedules

bench check Keyer control/control and display units
perform gyro bias calibrations
isolate malfunctions to platform continuity checkers

VII. MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS REPAIR CLUSTER (GRP054, N=166). This group of repair personnel, comprising 14 percent of the survey sample, performed a special job involving the repair and maintenance of the MADAR system. These personnel work on C-5 and C-141 aircraft systems. They performed both on- and off-equipment maintenance, which accounted for 48 percent of their job time, with general INS repair functions consuming the remaining job time. All of these personnel are assigned to MAC. Fifty-one percent of these MADAR system personnel held 5-skill level DAFSC; 32 percent held 3-skill level, while 7-skill level technicians made up 16 percent. Seventy-two percent of these 166 airmen were in their first enlistment. The average group member performs 72 tasks. Within this cluster, three different jobs were identified:

A. General MADAR Systems Repair Personnel (GRP220, N=147). This group of 147 airmen performs maintenance and repair on the MADAR system and other general INS functions. Forty-nine percent of their job time was spent on tasks directly related to MADAR functions. These personnel work both in-shop and on the flightline. Seventy-four percent of these personnel are in their first enlistment and perform an average of 101 tasks. Common tasks include:

isolate malfunctions to MADAR signal acquisition
remotes (SAR)
isolate malfunctions to MADAR data retrieval units (DRU)
isolate malfunctions to MADAR printout units (POU)
remove or replace MADAR SAR
remove or replace MADAR DRU
remove or replace MADAR SCU
reprogram MADAR computers

Only 40 percent of the MADAR airmen felt their training was adequately utilized. This impression is probably a result of performing tasks restricted primarily to the MADAR system.

B. Enroute MADAR Systems Repair Personnel (GRP111, N=6). This small group comprise those personnel who provided enroute or transit maintenance on MADAR systems. The main distinction between these airmen and the general MADAR systems repair personnel is that these personnel perform primarily routine flightline maintenance on transit aircraft. They are experienced personnel having an average grade of E-6, with an average of 159 months in service. As more senior technicians, they are also first-line supervisors. These members perform an average of 90 tasks; these include the MADAR tasks outlined above. Other tasks they perform include:

- refuel or defuel aircraft
- operate non-powered AGE
- launch or recover aircraft
- operate powered AGE
- tow aircraft
- counsel subordinates on personal or military-related problems
- assist in removing aircraft or replacing aircraft mechanical systems
- assist other avionics specialists in repair of other avionics systems
- install or remove 780 equipment

C. In-Shop MADAR Systems Repair Personnel (GRP262, N=8).
 This group of MADAR personnel is primarily involved with in-shop maintenance. They perform off-equipment malfunction analysis detection and recording (MADAR) systems functions. Common tasks included:

- bench check MADAR DRU
- bench check MADAR ODRU
- bench check MADAR SCU
- bench check MADAR MDR
- program MADAR computers
- align MADAR POU
- align MADAR MMUX
- align MADAR SCM
- align MADAR CMA
- align MADAR CSU

These In-Shop MADAR Repair Personnel have an average grade of E-4, an average of 39 months in service, and most (75 percent) are in their first enlistment. All of these members are assigned to MAC and they perform an average of 79 tasks. Job satisfaction indicators are generally positive for this group, with one-half of the group indicating they will reenlist.

VIII. ADMINISTRATIVE AND SUPERVISORY CLUSTER (GRP018, N=105).
 This cluster contains 9 percent of the survey sample. Cluster personnel, on the average, spent over 70 percent of their job time on supervisory-type duties, such as inspecting and evaluating, directing and implementing, and training. Typical tasks included:

- coordinate work with other sections
- draft correspondence
- conduct or participate in staff meetings
- evaluate compliance with work standards
- indoctrinate newly assigned personnel

Eighty-three percent of these individuals hold the 7-skill level and they supervise an average of six subordinates. Members of this cluster group average 157 months in the career field, 179 months in service, and all job satisfaction indicators are relatively high. This cluster has five job types which are discussed below:

A. Section Chiefs and Supervisors (GRP205, N=40). The 40 members of this job type spend most of their time (69 percent) in supervisory duties common to the cluster. They supervise personnel in the performance of tasks related to the INS systems. With 95 percent holding the 7-skill level DAFSC, the group has an average grade of E-6, and supervises an average of 7 people. They perform an average of 202 tasks. Common tasks include:

- provide technical assistance for job-related problems
- schedule work assignments
- counsel subordinates on personal or military-related problems
- prepare APRs
- establish work priorities

B. Course Supervisors (GRP152, N=8). These personnel are primarily involved with the supervision of Course instructors. They spent 85 percent of their job time on planning, directing and implementing, inspecting and evaluating, and training. With an average grade of E-6, an average of 182 months in service, they perform an average of 85 tasks. Common tasks included:

- evaluate training performance
- evaluate instructor performance
- counsel trainees on training progress
- evaluate progress of training
- evaluate training methods, techniques or programs
- direct training course

C. Flightline MADAR Supervisors (GRP118, N=7). This small group of respondents are supervisors on the flightline for personnel maintaining and repairing the MADAR system. These personnel are experienced supervisors, having an average of 182 months in service and performing an average of 84 tasks. Common tasks include:

- teach MADAR troubleshooting techniques
- direct flightline maintenance activities
- supervise Avionic Inertial and Radar Navigation Systems Specialists (AFSC 32854)
- schedule work assignments
- prepare APRs
- establish work priorities

D. OJT Managers (GRP085, N=5). These management personnel spent 29 percent of their time performing training functions. Their primary function involved planning, scheduling, and administering on-the-job training. These personnel are highly skilled, having an average grade of E-6, an average of 189 months in service, and performing an average of 31 tasks. Common tasks include:

- maintain training records
- select personnel to attend training programs
- indoctrinate newly assigned personnel
- review training reports
- assign on-the-job training trainers

E. Quality Control Inspectors (GRP047, N=20). These personnel are responsible for day-to-day quality control. They provide a double check on the accuracy and quality of repair and calibration work done on systems and equipment. The three duties occupying most of the job time of these individuals are inspecting and evaluating (41 percent), directing and implementing (18 percent), and organizing and planning (15 percent). Ninety percent of these personnel hold 7-skill level DAFSC. They have an average of 183 months in service and perform an average of 49 tasks. Typical tasks include:

- evaluate compliance with work standards
- inspect maintenance activities
- perform quality assurance checks
- write inspection reports
- write staff studies, surveys, or special reports,
 - other than training reports
- conduct safety inspections
- inspect consolidated tool kits

IX. TRAINING PERSONNEL (GRP008, N=38). This group of 38 members is composed primarily of avionic inertial and radar navigation technicians serving as classroom instructors. Although these members average six years in the career field, the job they perform is rather limited in scope. Sixty-five percent of their job time is devoted specifically to training and 10 percent to directing and implementing, while the remainder is devoted to administrative and technical duties. Typical tasks include:

- conduct residence course training
- evaluate progress of trainees
- administer or score tests
- demonstrate operation of equipment
- counsel trainees on training progress
- counsel subordinates on personal or military-related problems

- conduct remedial training
- develop course curricula, POI, or STS
- maintain training equipment
- evaluate training methods techniques or programs

All of these personnel are assigned to ATC and the majority feel their jobs are interesting and made adequate use of their talents and training.

Comparison of Specialty Jobs

Jobs within this specialty vary in terms of navigation systems and models of aircraft worked on, number of tasks performed, and various other factors. Several tables (see Tables 4, 5, and 6) are presented which contrast the difference between the job groups identified. The data in these tables summarize information about job groups.

Members of the 328X4 career field forming clusters and job types were distinguished by the type of system or systems they maintained. The primary factors influencing the grouping of jobs in the career ladder were functions such as management, supervision, maintenance and repair of systems, and training. Specialization within this career field also results from respondents specializing on doppler navigation systems or inertial navigation systems and whether they perform on-equipment or off-equipment maintenance or both.

The job difficulty for each job group identified within the specialty is presented in Table 6. Overall, the range of variability was fairly great in terms of the relative degree of difficulty of each job performed. The special equipment technicians, who performed an average of 666 tasks, had the highest JDI (22.9), while the aircraft support personnel group, who performed an average of 35 tasks, had the lowest (3.6). This degree of variation indicates there are some very real differences in the difficulty of the jobs. The extremely high JDI of special equipment technicians, along with the extra training their job requires, indicates it exceeds the normal requirements of the career ladder. In many ways, this job is similar to PMEL jobs (AFSC 324X0).

The various job groups displayed few differences in their attitudes about their jobs. The majority of individuals felt their jobs were interesting and their talents and training were well utilized. Reenlistment intent was also positive among all groups, with the exception of ASN-63 In-Shop Navigational System Repair Personnel and B-52G/H Navigation Systems Repair Personnel. Slightly less than 50 percent of the members of those two groups indicated they would reenlist.

Summary

As shown by the career ladder analysis, survey respondents perform diverse jobs involving various inertial navigation systems. Essentially, most of the variability in specialty jobs was a function of differences in type of system, doppler versus INS, and flightline maintenance versus in-shop maintenance. In-shop or flightline-oriented activities accounted for the largest percentages of the relative job time for all technical job groups.

Finally, job satisfaction was fairly high for a majority of the individuals working in the 328X4 career field and high percentages of individuals indicated they plan to reenlist.

One minor potential problem area is the small group of special equipment technicians who, in addition to the normal 328X4 tasks, are also performing PMEL type functions (calibrate test sets, maintain PMEL test equipment schedule, etc.). The number of individuals is small (7 people), but their jobs appear to overlap with PMEL (AFSC 324X0).

TABLE 4

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY FUNCTIONAL JOB GROUPS

DUTIES	INS COMPONENT REPAIR JOB TYPES					
	INS COMP REPAIR CLUSTER (GRP043, N=155)	IN-SHOP INS COMP REPAIR PERS (GRP189, N=18)	DIGITAL MODULAR REPAIR PERS (GRP131, N=75)	ASN-63 IN-SHOP NAV SYSTEMS REPAIR PERS (GRP251, N=39)	ASN-56 NAV SYSTEMS FTLT REPAIR PERS (GRP165, N=58)	ASN-56 NAV SYSTEMS IN-SHOP REPAIR PERS (GRP072, N=14)
A ORGANIZING AND PLANNING	2	*	2	1	*	3
B DIRECTING AND IMPLEMENTING	3	1	3	2	*	6
C INSPECTING AND EVALUATING	3	3	4	2	3	5
D TRAINING	3	2	4	2	*	3
E PERFORMING MAINTENANCE MANAGEMENT FUNCTIONS	9	9	8	8	16	17
F PERFORMING AIRCRAFT GENERAL SUPPORT FUNCTIONS	2	1	2	2	5	1
G PERFORMING AVIONIC INERTIAL AND DOPPLER RADAR NAVIGATIONAL SYSTEM GENERAL MAINTENANCE FUNCTIONS	9	9	8	11	15	10
H MAINTAINING ON-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	*	-	-	*	*	-
I MAINTAINING OFF-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	*	-	-	*	-	-
J MAINTAINING ON-EQUIPMENT INERTIAL NAVIGATION SYSTEMS	8	4	9	10	16	3
K MAINTAINING OFF-EQUIPMENT/INERTIAL NAVIGATIONAL SYSTEMS EQUIPMENT	16	25	11	16	15	28
L MAINTAINING ON-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	8	4	14	*	*	1
M MAINTAINING OFF-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	9	21	13	*	*	*
N MAINTAINING ON-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS (SUCH AS ASN-67/7A OR ASN-35 & 46)	4	1	3	7	9	1
O MAINTAINING OFF-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	9	9	5	12	15	19
P MAINTAINING ON-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	5	*	4	10	1	-
Q MAINTAINING OFF-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	8	8	6	15	1	2
R MAINTAINING ON-EQUIPMENT OMEGA NAVIGATION SYSTEMS	-	-	*	-	-	-
S MAINTAINING OFF-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	-	*	-	-	-
T MAINTAINING ON-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	*	-	*	-	-	-
U MAINTAINING OFF-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	*	-	*	-	-	-
V MAINTAINING ON-EQUIPMENT FUEL SAVINGS ADVISORY SYSTEM (FSAS)	*	-	*	-	-	-
W MAINTAINING CATEGORY II/PECULIAR (PEC) TEST EQUIPMENT AND MOCK-UPS	3	1	4	3	3	1

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY FUNCTIONAL JOB GROUPS

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TABLE 4 (CONTINUED)

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY FUNCTIONAL JOB GROUPS

DUTIES	DOPPLER SYSTEMS REPAIR PERS JOB TYPES									
	APN-218					ASTRO				
	DOPPLER SYSTEMS REPAIR PERS (GRP044, N=493)	DOPPLER NAV SYSTEMS REPAIR PERS (GRP120, N=86)	GENERAL DOPPLER SYSTEMS MAINT PERS (GRP268, N=179)	DOPPLER SYSTEMS SHIFT LEADERS & NCOICs (GRP215, N=78)	INERTIAL NAV SYSTEMS REPAIR PERS (GRP166, N=26)					
A ORGANIZING AND PLANNING	2	1	1	4	1					
B DIRECTING AND IMPLEMENTING	3	3	1	7	3					
C INSPECTING AND EVALUATING	4	4	3	8	3					
D TRAINING	4	3	2	8	3					
E PERFORMING MAINTENANCE MANAGEMENT FUNCTIONS	9	11	6	11	10					
F PERFORMING AIRCRAFT GENERAL SUPPORT FUNCTIONS	3	4	2	12	4					
G PERFORMING AVIONIC INERTIAL AND DOPPLER RADAR NAVIGATIONAL SYSTEM GENERAL MAINTENANCE FUNCTIONS	14	18	12	11	12					
H MAINTAINING ON-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	12	14	16	11	7					
I MAINTAINING OFF-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	15	11	26	13	4					
J MAINTAINING ON-EQUIPMENT INERTIAL NAVIGATION SYSTEMS	17	22	11	13	24					
K MAINTAINING OFF-EQUIPMENT/INERTIAL NAVIGATION SYSTEMS EQUIPMENT	5	4	4	3	10					
L MAINTAINING ON-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	*	*	*	*	*					
M MAINTAINING OFF-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	*	*	*	*	*					
N MAINTAINING ON-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS (SUCH AS ASN-6/7/7A OR ASN-35 & 46)	3	1	4	1	1					
O MAINTAINING OFF-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	3	1	6	1	1					
P MAINTAINING ON-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	*	-	*	*	*					
Q MAINTAINING OFF-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	*	-	*	*	*					
R MAINTAINING ON-EQUIPMENT OMEGA NAVIGATION SYSTEMS	1	-	*	*	*					
S MAINTAINING OFF-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	-	*	*	*					
T MAINTAINING ON-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	1	*	1	*	*					
U MAINTAINING OFF-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	*	-	*	-	-					
V MAINTAINING ON-EQUIPMENT FUEL SAVINGS ADVISORY SYSTEM (FSAS)	*	-	*	-	-					
W MAINTAINING CATEGORY II/PECULIAR (PEC) TEST EQUIPMENT AND MOCK-UPS	4	2	4	6	18					

TABLE 4 (CONTINUED)

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY FUNCTIONAL JOB GROUPS

DUTIES	CAROUSEL JOB TYPES						
	CAROUSEL IV-E NAV SYS REPAIR CLUSTER (GRP067, N=74)	C-5 & C-141 NON-DOPPLER CAROUSEL IV-E REPAIR PERSONNEL (GRP082, N=51)	AWACS NAV SYSTEMS REPAIR PERS (GRP101, N=23)	B-52G/H NAV SYS REPAIR PERS (GRP052, N=9)	SPECIAL EQUIP TECH (GRP094, N=7)		
A ORGANIZING AND PLANNING	1	1	2	*	1		
B DIRECTING AND IMPLEMENTING	4	3	5	*	2		
C INSPECTING AND EVALUATING	4	4	4	2	3		
D TRAINING	5	4	7	*	3		
E PERFORMING MAINTENANCE MANAGEMENT FUNCTIONS	11	11	12	9	6		
F PERFORMING AIRCRAFT GENERAL SUPPORT FUNCTIONS	5	3	8	4	5		
G PERFORMING AVIONIC INERTIAL AND DOPPLER RADAR NAVIGATIONAL SYSTEM GENERAL MAINTENANCE FUNCTIONS	17	18	14	22	11		
H MAINTAINING ON-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	2	1	6	15	1		
I MAINTAINING OFF-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	1	*	1	8	*		
J MAINTAINING ON-EQUIPMENT INERTIAL NAVIGATION SYSTEMS	30	33	21	26	18		
K MAINTAINING OFF-EQUIPMENT/INERTIAL NAVIGATIONAL SYSTEMS EQUIPMENT	11	16	*	3	2		
L MAINTAINING ON-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	*	*	-	-	*		
M MAINTAINING OFF-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	-	-	-	-	*		
N MAINTAINING ON-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS (SUCH AS ASN-6/7/7A OR ASN-35 & 46)	1	*	2	6	*		
O MAINTAINING OFF-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	*	*	-	3	-		
P MAINTAINING ON-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	-	-	-	-	-		
Q MAINTAINING OFF-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	-	-	-	-	-		
R MAINTAINING ON-EQUIPMENT OMEGA NAVIGATION SYSTEMS	5	-	15	-	*		
S MAINTAINING OFF-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	*	1	-	-		
T MAINTAINING ON-EQUIPMENT HALF-ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	*	*	-	-	34		
U MAINTAINING OFF-EQUIPMENT HALF-ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	-	-	-	-	14		
V MAINTAINING ON-EQUIPMENT FUEL SAVINGS ADVISORY SYSTEM (FSAS)	-	-	1	1	*		
W MAINTAINING CATEGORY II/PECULIAR (PEC) TEST EQUIPMENT AND MOCK-UPS	3	4	1	1	*		

TABLE 4 (CONTINUED)

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY FUNCTIONAL JOB GROUPS

DUTIES	MADAR SYSTEMS JOB TYPES					
	MADAR SYSTEMS REPAIR CLUSTER (GRP054, N=166)	GENERAL MADAR SYSTEMS REPAIR PERS (GRP220, N=147)	ENROUTE MADAR SYSTEMS REPAIR PERS (GRP111, N=6)	IN-SHOP MADAR SYSTEMS REPAIR PERS (GRP262, N=8)		
A ORGANIZING AND PLANNING	1	10	3		4	
B DIRECTING AND IMPLEMENTING	2	13	5		4	
C INSPECTING AND EVALUATING	2	9	6		4	
D TRAINING	2	8	5		3	
E PERFORMING MAINTENANCE MANAGEMENT FUNCTIONS	6	5	6		5	
F PERFORMING AIRCRAFT GENERAL SUPPORT FUNCTIONS	4	21	3		*	
G PERFORMING AVIONIC INERTIAL AND DOPPLER RADAR NAVIGATIONAL SYSTEM GENERAL MAINTENANCE FUNCTIONS	11	9	5		4	
H MAINTAINING ON-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	1	*	5		-	
I MAINTAINING OFF-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	-	*	5		-	
J MAINTAINING ON-EQUIPMENT INERTIAL NAVIGATION SYSTEMS	19	11	11		5	
K MAINTAINING OFF-EQUIPMENT/INERTIAL NAVIGATIONAL SYSTEMS EQUIPMENT	2	*	7		5	
L MAINTAINING ON-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	*	*	4		1	
M MAINTAINING OFF-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	*	*	2		-	
N MAINTAINING ON-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS (SUCH AS ASN-6/7/7A OR ASN-35 & 46)	*	-	3		-	
O MAINTAINING OFF-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	*	-	3		-	
P MAINTAINING ON-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	-	-	3		-	
Q MAINTAINING OFF-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	-	-	2		-	
R MAINTAINING ON-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	-	3		-	
S MAINTAINING OFF-EQUIPMENT OMEGA NAVIGATION SYSTEMS	-	-	1		-	
T MAINTAINING ON-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	37	12	3		10	
U MAINTAINING OFF-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	12	-	4		59	
V MAINTAINING ON-EQUIPMENT FUEL SAVINGS ADVISORY SYSTEM (FSAS)	*	-	1		-	
W MAINTAINING CATEGORY II/PECULIAR (PEC) TEST EQUIPMENT AND MOCK-UPS	*	-	12		1	

TABLE 4 (CONTINUED)

RELATIVE PERCENTAGE OF TIME SPENT ON DUTIES BY FUNCTIONAL JOB GROUPS

DUTIES	ADMIN & SUPVY JOB TYPES						
	ADMIN & SUPVY CLUSTER (GRP018, N=105)	SECTION CHIEFS & SUPVs (GRP205, N=40)	COURSE SUPVs (GRP152, N=8)	FLTL MADAR SUPVs (GRP118, N=7)	OJT MANAGERS (GRP085, N=5)	QUALITY CONTROL INSP (GRP047, N=20)	TRAINING PERS (GRP008, N=38)
A ORGANIZING AND PLANNING	14	13	15	9	14	15	4
B DIRECTING AND IMPLEMENTING	21	20	19	27	28	18	10
C INSPECTING AND EVALUATING	22	20	16	14	19	41	5
D TRAINING	15	15	35	14	29	5	65
E PERFORMING MAINTENANCE MANAGEMENT FUNCTIONS	14	16	7	5	9	10	6
F PERFORMING AIRCRAFT GENERAL SUPPORT FUNCTIONS	2	2	*	4	-	1	1
G PERFORMING AVIONIC INERTIAL AND DOPPLER RADAR NAVIGATIONAL SYSTEM GENERAL MAINTENANCE FUNCTIONS	4	5	*	5	-	6	1
H MAINTAINING ON-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	*	1	1	-	-	-	*
I MAINTAINING OFF-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	*	*	1	-	-	-	2
J MAINTAINING ON-EQUIPMENT INERTIAL NAVIGATION SYSTEMS	3	3	1	8	-	-	1
K MAINTAINING OFF-EQUIPMENT/INERTIAL NAVIGATIONAL SYSTEMS EQUIPMENT	*	1	-	1	-	-	2
L MAINTAINING ON-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	-	-	-	-	-	-	-
M MAINTAINING OFF-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	-	-	-	-	-	-	-
N MAINTAINING ON-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS (SUCH AS ASN-6/7/7A OR ASN-35 & 46)	*	1	-	-	-	-	*
O MAINTAINING OFF-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	*	*	*	-	-	-	1
P MAINTAINING ON-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	*	*	-	-	-	-	-
Q MAINTAINING OFF-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	*	*	-	-	-	-	-
R MAINTAINING ON-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	*	-	-	-	-	2
S MAINTAINING OFF-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	*	-	-	-	-	-
T MAINTAINING ON-EQUIPMENT HALF-ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	1	1	3	12	-	-	-
U MAINTAINING OFF-EQUIPMENT HALF-ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	*	-	1	*	-	-	-
V MAINTAINING ON-EQUIPMENT FUEL SAVINGS ADVISORY SYSTEM (FSAS)	-	-	-	-	-	-	-
W MAINTAINING CATEGORY II/PECULIAR (PEC) TEST EQUIPMENT AND MOCK-UPS	2	2	-	1	-	5	1

TABLE 5

JOB SATISFACTION INFORMATION FOR 328X4 CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT RESPONDING)

INS COMPONENT REPAIR JOB TYPES						
	INS COMP REPAIR CLUSTER (GRP043, N=155)	IN-SHOP INS COMP REPAIR PERS (GRP189, N=18)	DIGITAL MODULAR REPAIR PERS (GRP131, N=75)	ASN-63 IN-SHOP NAV SYSTEMS REPAIR PERS (GRP251, N=39)	ASN-56 NAV SYSTEMS FLTL REPAIR PERS (GRP165, N=58)	ASN-56 NAV SYSTEMS IN-SHOP REPAIR PERS (GRP072, N=14)
HOW DO YOU FIND YOUR JOB:						
DULL	7	6	5	5	0	14
SO-SO	12	16	11	13	20	7
INTERESTING	81	78	84	82	80	72
OTHER	-	-	-	-	-	7
HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:						
VERY LITTLE OR NOT AT ALL	13	11	11	13	20	21
FAIRLY WELL TO PERFECTLY	87	89	89	87	80	79
OTHER	-	-	-	-	-	-
HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:						
VERY LITTLE OR NOT AT ALL	15	0	20	8	20	14
FAIRLY WELL TO PERFECTLY	85	100	80	92	80	86
OTHER	-	-	-	-	-	-
DO YOU PLAN TO REENLIST:						
NO, WILL RETIRE	2	-	3	3	-	-
NO, OR PROBABLY NO	37	39	30	51	40	21
YES, OR PROBABLY YES	60	61	67	44	60	79
OTHER	1	-	-	2	-	-

NOTE: Columns may not add to 100 percent due to "no response" or rounding

TABLE 5 (CONTINUED)

JOB SATISFACTION INFORMATION FOR 328X4 CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT RESPONDING)

		INS FLTL MAINT PERS JOB TYPES				
DIG MOD		AVIONIC SYSTEMS FLTL REPAIR PERS (GRP263, N=30)	ASN-46 NAV COMPUTER REPAIR PERS (GRP200, N=12)	ASN-63 INS FLTL REPAIR PERS (GRP161, N=68)	AIRCRAFT SUPPORT PERS (GRP050, N=42)	
INS						
FLTL						
MAINT						
PERS						
CLUSTER						
(GRP039, N=161)						
	15	3	25	9	32	
	22	13	25	29	14	
	62	84	50	60	53	
	1	-	-	2	2	
<u>HOW DO YOU FIND YOUR JOB:</u>						
DULL						
SO-SO						
INTERESTING						
OTHER						
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>						
VERY LITTLE OR NOT AT ALL	41	30	50	30	61	
FAIRLY WELL TO PERFECTLY	58	70	50	65	38	
OTHER	1	-	-	-	2	
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>						
VERY LITTLE OR NOT AT ALL	45	33	50	40	64	
FAIRLY WELL TO PERFECTLY	54	67	50	60	33	
OTHER	1	-	-	-	3	
<u>DO YOU PLAN TO REENLIST:</u>						
NO, WILL RETIRE	4	3	0	6	2	
NO, OR PROBABLY NO	26	30	50	24	22	
YES, OR PROBABLY YES	70	67	50	70	76	
OTHER	-	-	-	-	-	

NOTE: Columns may not add to 100 percent due to "no response" or rounding

TABLE 5 (CONTINUED)

JOB SATISFACTION INFORMATION FOR 328X4 CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT RESPONDING)

	DOPPLER SYSTEMS REPAIR PERS JOB TYPES									
	DOPPLER SYSTEMS REPAIR PERS CLUSTER (GRP044, N=493)	APN-218 DOPPLER NAV SYSTEMS REPAIR PERS (GRP120, N=86)	GENERAL DOPPLER SYSTEMS MAINT PERS (GRP268, N=179)	DOPPLER SYSTEMS SHIFT LEADERS & NCOICs (GRP215, N=78)	ASTRO INERTIAL NAV SYSTEMS REPAIR PERS (GRP166, N=26)					
HOW DO YOU FIND YOUR JOB:										
DULL	7	8	6	5	-					
SO-SO	11	14	7	13	15					
INTERESTING	81	76	87	81	85					
OTHER	1	2	-	1	-					
HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:										
VERY LITTLE OR NOT AT ALL	15	20	9	14	15					
FAIRLY WELL TO PERFECTLY	85	79	90	86	85					
OTHER	-	1	1	-	-					
HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:										
VERY LITTLE OR NOT AT ALL	24	31	16	18	39					
FAIRLY WELL TO PERFECTLY	76	68	84	82	61					
OTHER	-	1	-	-	-					
DO YOU PLAN TO REENLIST:										
NO, WILL RETIRE	4	2	3	12	-					
NO, OR PROBABLY NO	29	29	28	23	39					
YES, OR PROBABLY YES	66	69	68	65	61					
OTHER	1	-	1	-	-					

NOTE: Columns may not add to 100 percent due to "no response" or rounding

TABLE 5 (CONTINUED)

JOB SATISFACTION INFORMATION FOR 328X4 CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT RESPONDING)

	CAROUSEL JOB TYPES					SPECIAL EQUIP TECH (GRP094, N=7)
	CAROUSEL IV-E NAV SYS REPAIR CLUSTER (GRP067, N=74)	C-5 & C-141 NON-DOPPLER CAROUSEL IV-E REPAIR PERSONNEL (GRP082, N=51)	AWACS NAV SYSTEMS REPAIR PERS (GRP101, N=23)	B-52G/H NAV SYS REPAIR PERS (GRP052, N=9)		
<u>HOW DO YOU FIND YOUR JOB:</u>						
DULL	11	8	17	11	-	
SO-SO	14	8	26	22	14	
INTERESTING	75	84	57	67	86	
OTHER	-	-	-	-	-	
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>						
VERY LITTLE OR NOT AT ALL	18	12	30	-	-	
FAIRLY WELL TO PERFECTLY	82	88	70	100	86	
OTHER	-	-	-	-	14	
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>						
VERY LITTLE OR NOT AT ALL	35	31	44	22	14	
FAIRLY WELL TO PERFECTLY	65	69	56	78	71	
OTHER	-	-	-	-	15	
<u>DO YOU PLAN TO REENLIST:</u>						
NO, WILL RETIRE	-	-	-	-	15	
NO, OR PROBABLY NO	28	31	22	56	14	
YES, OR PROBABLY YES	69	67	74	44	57	
OTHER	3	2	4	-	14	

NOTE: Columns may not add to 100 percent due to "no response" or rounding

TABLE 5 (CONTINUED)
 JOB SATISFACTION INFORMATION FOR 328X4 CLUSTERS AND INDEPENDENT JOB TYPES
 (PERCENT RESPONDING)

	MADAR SYSTEMS JOB TYPES									
	MADAR SYSTEMS REPAIR CLUSTER (GRP054, N=166)	GENERAL MADAR SYSTEMS REPAIR PERS (GRP220, N=147)	ENROUTE MADAR SYSTEMS REPAIR PERS (GRP111, N=6)	IN-SHOP MADAR SYSTEMS REPAIR PERS (GRP262, N=8)						
<u>HOW DO YOU FIND YOUR JOB:</u>										
DULL	12	12	17	12						
SO-SO	19	20	17	-						
INTERESTING	68	67	66	88						
OTHER	1	1	-	-						
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>										
VERY LITTLE OR NOT AT ALL	25	27	33	12						
FAIRLY WELL TO PERFECTLY	75	73	67	88						
OTHER	-	-	-	-						
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>										
VERY LITTLE OR NOT AT ALL	56	60	50	25						
FAIRLY WELL TO PERFECTLY	43	40	50	75						
OTHER	1	-	-	-						
<u>DO YOU PLAN TO REENLIST:</u>										
NO, WILL RETIRE	2	-	33	0						
NO, OR PROBABLY NO	40	42	17	50						
YES, OR PROBABLY YES	57	58	50	50						
OTHER	1	-	-	-						

NOTE: Columns may not add to 100 percent due to "no response" or rounding

TABLE 5 (CONTINUED)

JOB SATISFACTION INFORMATION FOR 328X4 CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT RESPONDING)

	ADMIN & SUPVY JOB TYPES						
	ADMIN & SUPVY CLUSTER (GRP018, N=105)	SECTION CHIEFS & SUPVs (GRP205, N=40)	COURSE SUPVs (GRP152, N=8)	FLTL MADAR SUPVs (GRP118, N=7)	OJT MANAGERS (GRP085, N=5)	QUALITY CONTROL INSP (GRP047, N=20)	TRAINING PERS (GRP008, N=38)
<u>HOW DO YOU FIND YOUR JOB:</u>							
DULL	8	5	0	29	20	0	8
SO-SO	13	8	0	-	40	25	13
INTERESTING	77	87	100	71	40	70	79
OTHER	2	-	-	-	-	5	-
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TALENTS:</u>							
VERY LITTLE OR NOT AT ALL	26	18	12	43	40	20	26
FAIRLY WELL TO PERFECTLY	73	82	88	57	40	80	74
OTHER	1	-	-	-	20	-	-
<u>HOW WELL DOES YOUR JOB UTILIZE YOUR TRAINING:</u>							
VERY LITTLE OR NOT AT ALL	38	30	25	43	40	30	16
FAIRLY WELL TO PERFECTLY	61	70	75	57	60	70	84
OTHER	1	-	-	-	-	-	-
<u>DO YOU PLAN TO REENLIST:</u>							
NO, WILL RETIRE	20	25	25	29	-	15	11
NO, OR PROBABLY NO	15	5	25	14	20	25	5
YES, OR PROBABLY YES	63	65	50	57	80	60	82
OTHER	2	5	-	-	-	-	-

NOTE: Columns may not add to 100 percent due to "no response" or rounding

TABLE 6

SELECTED BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

INS COMPONENT REPAIR JOB TYPES							
		ASN-63		ASN-56		ASN-56	
		IN-SHOP		NAV		NAV	
		SYSTEMS		SYSTEMS		SYSTEMS	
		REPAIR		REPAIR		REPAIR	
		PERS		PERS		PERS	
		(GRP251, N=39)		(GRP165, N=58)		(GRP072, N=14)	

* Less than 1 percent

TABLE 6 (CONTINUED)

SELECTED BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

INS FLTL MAINT PERS JOB TYPES									
DIG MOD		AVIONIC SYSTEMS		ASN-46 NAV COMPUTER		ASN-63 INS FLTL		AIRCRAFT SUPPORT PERS	
		FLTL REPAIR PERS (GRP263, N=30)		REPAIR PERS (GRP200, N=12)		REPAIR PERS (GRP161, N=68)		(GRP050, N=42)	
NUMBER IN GROUP:		161		12		68		42	
PERCENTAGE OF TOTAL SAMPLE:		14%		1%		6%		4%	
PERCENT IN CONUS:		69%		75%		78%		41%	
DAFSC DISTRIBUTION:									
32834		20%		8%		21%		24%	
32854		52%		50%		50%		64%	
32874		16%		0%		21%		5%	
OTHER		12%		42%		8%		7%	
AVERAGE GRADE:									
AVERAGE MONTHS IN CAREER FIELD:		E-4		E-4		E-4		E-4	
AVERAGE MONTHS IN SERVICE:		45		20		47		41	
		52		21		55		47	
PERCENT IN FIRST ENLISTMENT:									
AVERAGE NUMBER SUPERVISED:		70%		100%		68%		63%	
AVERAGE NUMBER OF TASKS PERFORMED:		4		0		4		4	
JOB DIFFICULTY INDEX (JDI) (AVG JDI = 13.00):		62		46		70		35	
		8.2		5.5		9.4		3.6	
MAJOR COMMAND ASSIGNED:									
SAC		2%		-		81%		7%	
MAC		2%		-		5%		12%	
TAC		69%		83%		13%		34%	
PACAF		3%		-		-		4%	
USAFE		20%		9%		-		39%	
AFSC		-		-		-		-	
ATC		-		-		-		-	
AFCC		-		-		-		-	
OTHER		4%		9%		-		-	

* Less than 1 percent

TABLE 6 (CONTINUED)

SELECTED BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

	DOPPLER SYSTEMS REPAIR PERS JOB TYPES					
	APN-218	GENERAL	DOPPLER	ASTRO	INERTIAL	
	DOPPLER	DOPPLER	DOPPLER	NAV	NAV	
	SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS	
	REPAIR	REPAIR	REPAIR	REPAIR	REPAIR	
	PERS	PERS	PERS	PERS	PERS	
	CLUSTER	CLUSTER	CLUSTER	CLUSTER	CLUSTER	
	(GRP044, N=493)	(GRP120, N=86)	(GRP268, N=179)	(GRP215, N=78)	(GRP166, N=26)	
NUMBER IN GROUP:	493	86	179	78	26	
PERCENTAGE OF TOTAL SAMPLE:	2%	70%	15%	7%	2%	
PERCENT IN CONUS:	80%	88%	71%	86%	92%	
DAFSC DISTRIBUTION:						
32834	31%	45%	35%	8%	31%	
32854	48%	43%	53%	39%	54%	
32874	18%	11%	10%	51%	15%	
OTHER	3%	1%	2%	2%	-	
AVERAGE GRADE:	E-4	E-4	E-4	E-5	E-4	
AVERAGE MONTHS IN CAREER FIELD:	49	34	38	98	37	
AVERAGE MONTHS IN SERVICE:	56	41	42	111	47	
PERCENT IN FIRST ENLISTMENT:	62%	78%	76%	28%	65%	
AVERAGE NUMBER SUPERVISED:	4	4	3	5	3	
AVERAGE NUMBER OF TASKS PERFORMED:	134	96	153	206	128	
JOB DIFFICULTY INDEX (JDI) (AVG JDI = 13.00):	14.7	11.0	16.9	20.0	14.7	
MAJOR COMMAND ASSIGNED:						
SAC	46%	84%	29%	76%	100%	
MAC	38%	8%	55%	12%	-	
TAC	8%	1%	3%	10%	-	
PACAF	*	1%	2%	-	-	
USAFE	4%	1%	5%	1%	-	
AFSC	1%	1%	2%	1%	-	
ATC	2%	3%	4%	-	-	
AFCC	-	-	-	-	-	
OTHER	-	-	-	-	-	

* Less than 1 percent

TABLE 6 (CONTINUED)

SELECTED BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

	CAROUSEL JOB TYPES					
	CAROUSEL IV-E NAV SYS REPAIR CLUSTER (GRP067, N=74)	C-5 & C-141 NON-DOPPLER CAROUSEL IV-E REPAIR PERSONNEL (GRP082, N=51)	AWACS NAV SYSTEMS REPAIR PERS (GRP101, N=23)	B-52G/H NAV SYS REPAIR PERS (GRP052, N=9)	SPECIAL EQUIP TECH (GRP094, N=7)	
NUMBER IN GROUP:	74	51	23	9	7	
PERCENTAGE OF TOTAL SAMPLE:	6%	4%	2%	1%	8	
PERCENT IN CONUS:	89%	96%	74%	89%	71%	
DAFSC DISTRIBUTION:						
32834	36%	43%	22%	67%	29%	
32854	45%	45%	44%	22%	29%	
32874	11%	10%	13%	0%	42%	
OTHER	8%	2%	21%	11%	-	
AVERAGE GRADE:	E-4	E-4	E-4	E-3	E-4	
AVERAGE MONTHS IN CAREER FIELD:	37	33	47	21	81	
AVERAGE MONTHS IN SERVICE:	47	41	61	24	103	
PERCENT IN FIRST ENLISTMENT:	66%	69%	61%	89%	29%	
AVERAGE NUMBER SUPERVISED:	5	5	6	0	2	
AVERAGE NUMBER OF TASKS PERFORMED:	82	85	76	49	66	
JOB DIFFICULTY INDEX (JDI) (AVG JDI = 13.00):	10.0	10.7	8.6	5.0	22.9	
MAJOR COMMAND ASSIGNED:						
SAC	-	-	4%	78%	28%	
MAC	62%	90%	-	-	14%	
TAC	28%	-	91%	-	29%	
PACAF	-	-	-	-	-	
USAFE	-	-	-	-	-	
AFSC	-	-	-	-	-	
ATC	-	-	-	-	29%	
AFCC	-	-	-	-	-	
OTHER	3%	2%	1%	22%	-	

* Less than 1 percent

TABLE 6 (CONTINUED)

SELECTED BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

MADAR SYSTEMS JOB TYPES				
	GENERAL MADAR SYSTEMS REPAIR PERS (GRP220, N=147)	ENROUTE MADAR SYSTEMS REPAIR PERS (GRP111, N=6)	IN-SHOP MADAR SYSTEMS REPAIR PERS (GRP262, N=8)	
NUMBER IN GROUP:	166	147	6	8
PERCENTAGE OF TOTAL SAMPLE:	14%	14%	*	*
PERCENT IN CONUS:	87%	89%	17%	0%
DAFSC DISTRIBUTION:				
32834	32%	32%	0%	38%
32854	51%	53%	0%	62%
32874	16%	14%	83%	-
OTHER	1%	1%	17%	-
AVERAGE GRADE:				
AVERAGE MONTHS IN CAREER FIELD:	E-4	E-4	E-6	E-4
AVERAGE MONTHS IN SERVICE:	44	41	138	34
	50	46	159	37
PERCENT IN FIRST ENLISTMENT:				
AVERAGE NUMBER SUPERVISED:	72%	74%	0%	75%
AVERAGE NUMBER OF TASKS PERFORMED:	5	4	4	7
JOB DIFFICULTY INDEX (JDI) (AVG JDI = 13.00):	72	101	90	79
	12.7	12.7	11.3	15.4
MAJOR COMMAND ASSIGNED:				
SAC	-	-	-	-
MAC	99%	100%	84%	100%
TAC	-	-	-	-
PACAF	-	-	-	-
USAFE	*	-	16%	-
AFSC	-	-	-	-
ATC	-	-	-	-
AFCC	-	-	-	-
OTHER	-	-	-	-

* Less than 1 percent

TABLE 6 (CONTINUED)

SELECTED BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

	ADMIN & SUPVY JOB TYPES						
	ADMIN & SUPVY CLUSTER (GRP018, N=105)	SECTION CHIEFS & SUPVs (GRP205, N=40)	COURSE SUPVs (GRP152, N=8)	FLTL MADAR SUPVs (GRP118, N=7)	OJT MANAGERS (GRP085, N=5)	QUALITY CONTROL INSP (GRP047, N=20)	TRAINING PERS (GRP008, N=38)
NUMBER IN GROUP:	105	40	8	7	5	20	38
PERCENTAGE OF TOTAL SAMPLE:	9%	3%	*	*	*	2%	3%
PERCENT IN CONUS:	68%	73%	75%	100%	40%	70%	95%
DAFSC DISTRIBUTION:							
32834	1%	0%	0%	0%	0%	0%	0%
32854	5%	5%	25%	14%	0%	10%	79%
32874	83%	95%	63%	86%	100%	90%	21%
OTHER	1%	0%	13%	-	-	-	-
AVERAGE GRADE:	E-6	E-6	E-6	E-6	E-6	E-6	E-4
AVERAGE MONTHS IN CAREER FIELD:	157	175	157	159	157	162	82
AVERAGE MONTHS IN SERVICE:	179	202	182	180	189	183	95
PERCENT IN FIRST ENLISTMENT:	3%	0%	13%	0%	0%	0%	24%
AVERAGE NUMBER SUPERVISED:	6	7	9	6	6	4	12
AVERAGE NUMBER OF TASKS PERFORMED:	84	138	85	74	31	49	22
JOB DIFFICULTY INDEX (JDI) (AVG JDI = 13.00):	12.1	15.6	13.6	11.6	6.8	10.5	8.2
MAJOR COMMAND ASSIGNED:							
SAC	11%	18%	-	-	*	15%	-
MAC	29%	28%	12%	100%	*	30%	-
TAC	20%	25%	-	-	40%	20%	-
PACAF	5%	5%	-	-	20%	5%	-
USAFE	17%	15%	13%	-	40%	10%	-
AFSC	4%	2%	-	-	-	5%	-
ATC	8%	5%	75%	-	-	-	100%
AFCC	-	2%	-	-	-	-	-
OTHER	6%	-	-	-	-	-	-

* Less than 1 percent

ANALYSIS OF DAFSC GROUPS

In addition to identification and analysis of the job variations of the 328X4 career ladder, the 3-, 5-, and 7-skill level groups within the sample were also examined. There is no 9-skill level or CEM level specifically designated for the 328X4 career field, as the six other 328XX ladders have a common 32899 and the entire 32XXX career field has a common 32000 CEM. The DAFSC analysis reveals similarities and differences between the groups in relation to tasks performed and the relative percentage of time spent on particular duties. These data may be used in determining the accuracy of career ladder documents, such as AFR 39-1 Specialty Description and the Specialty Training Standards (STS), as well as planning and establishing training needs.

The distribution of 328X4 skill levels across career ladder job groups is displayed in Table 6, while Table 7 displays the relative percent time spent on each duty across skill-level groups. The jobs performed by Avionic Inertial and Radar Navigation Systems personnel require similar amounts of time for the performance of tasks for most duty areas for 3- and 5-skill level personnel. Accordingly, the technical tasks performed vary only slightly between 3- and 5-skill levels (see Table 8); the only difference is that some 5-skill level personnel are performing some supervisory tasks, such as OJT and technical assistance. A greater shift in emphasis was observed, however, at the 7-skill level (see Table 9). Respondents holding DAFSC 32874 reported spending 56 percent of their relative job time performing Supervisory, Managerial, Training, and Administrative tasks (Duties A, B, C, D, and E). Further discussion of specific skill level groups is presented below.

DAFSC 32834. The 3-skill level personnel, representing 28 percent (315 members) of the 328X4 sample, performed an average of 98 tasks. These members spent 95 percent of their job time on technical duties, with a majority reporting they spent approximately one-half of their job time performing tasks related to maintenance management, avionic inertial and doppler radar navigation systems, off-equipment doppler radar navigation systems, and on-equipment inertial navigation systems. Examples of such tasks included:

- locate parts or stock numbers in technical publications
- make entries on AFTO Forms 349 (Maintenance Data Collection Record)
- isolate malfunctions to associated aircraft equipment
- remove or install access panels
- remove or replace control and display units (CDU)
- remove or replace inertial navigation unit (INU)
- bench check doppler navigation computers
- bench check doppler sensor RT

Table 10 lists additional tasks performed by this group to illustrate the kinds of tasks performed by the majority of 3-skill level personnel.

DAFSC 32854. The 535 members (48 percent of the 328X4 sample) at the 5-skill level perform a slightly broader job than indicated by 3-skill level respondents, with 84 percent of their duty time devoted to technically-oriented tasks. Table 11 presents examples of tasks performed by this group. Note that many of the tasks are the same as for the 3-skill level group. The members of this skill-level group performed an average of 110 tasks and spent approximately one-third of their job time on functions related to performing maintenance management functions, avionic inertial and doppler radar navigation systems general maintenance functions, and maintenance on on-equipment inertial navigation systems functions, while the remainder of time was distributed throughout the other duties. Some 5-skill level personnel (presumably the more senior ones) take on supervisory and administrative functions (Duties A, B, C, and D). The tasks which clearly differentiate between 3- and 5-skill level are related to supervision (see Table 8). Note that even some 3-skill level personnel (10-15 percent) report they conduct OJT or demonstrate repair techniques. This may be a function of the level of experience in the career ladder; almost 50 percent are in their first enlistment.

DAFSC 32874. Seven-skill level personnel represented 24 percent (273 members) of the 328X4 survey sample. They performed an average of 131 tasks, with 96 of those tasks accounting for over 50 percent of their job time. Although some (44 percent) of their job time was spent on technical functions, supervisory, managerial, and administrative tasks are dominant for 7-skill level groups. Table 12 presents examples of representative tasks for this group which indicate the range of the job with 79 percent of the group preparing APRs, while 63 percent operated inertial and radar navigation equipment for check-out of associated avionic systems. Thus, the 7-skill level job is still a mix of technical tasks and supervisory duties.

Differences between 5- and 7-skill level personnel are reflected by the listing of tasks in Table 12. As would be expected, the major differences in tasks performed involve supervisory and management responsibilities. Note, however, that only about 80 percent of the 7-skill level personnel are supervising (i.e., prepare APRs, counsel subordinates, etc.). Thus, there must be about 20 percent of the 7-skill level personnel who are in purely technical jobs (or in related support jobs such as quality control or training).

Summary

Career ladder progression is well defined. Overall, the responsibilities of the 3- and 5-skill level incumbents are similar. Both groups spend the vast majority of their job time performing technical tasks. In comparison, 7-skill level personnel perform a mix of technical and supervisory, managerial, training, or administrative tasks.

TABLE 7

AVERAGE PERCENT TIME SPENT PERFORMING DUTIES BY 328X4 DAFSC GROUPS

DUTIES	DAFSC 32834 (N=315)	DAFSC 32854 (N=535)	DAFSC 32874 (N=273)
A ORGANIZING AND PLANNING	1	2	8
B DIRECTING AND IMPLEMENTING	1	3	13
C INSPECTING AND EVALUATING	2	4	13
D TRAINING	1	7	11
E PERFORMING MAINTENANCE MANAGEMENT FUNCTIONS	9	10	11
F PERFORMING AIRCRAFT GENERAL SUPPORT FUNCTIONS	4	5	4
G PERFORMING AVIONIC INERTIAL AND DOPPLER RADAR NAVIGATIONAL SYSTEM GENERAL MAINTENANCE FUNCTIONS	15	13	8
H MAINTAINING ON-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	7	6	4
I MAINTAINING OFF-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	9	7	4
J MAINTAINING ON-EQUIPMENT INERTIAL NAVIGATION SYSTEMS	18	15	8
K MAINTAINING OFF-EQUIPMENT/INERTIAL NAVIGATIONAL SYSTEMS EQUIPMENT	7	5	2
L MAINTAINING ON-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	2	2	1
M MAINTAINING OFF-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	1	1	1
N MAINTAINING ON-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS (SUCH AS ASN-7/7/7A OR ASN-35 & 46)	3	3	2
O MAINTAINING OFF-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	3	3	1
P MAINTAINING ON-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	2	2	1
Q MAINTAINING OFF-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	2	1	1
R MAINTAINING ON-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	*	*
S MAINTAINING OFF-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	*	*
T MAINTAINING ON-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	7	6	4
U MAINTAINING OFF-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	3	3	*
V MAINTAINING ON-EQUIPMENT FUEL SAVINGS ADVISORY SYSTEM (FSAS)	*	0	*
W MAINTAINING CATEGORY II/PECULIAR (PEC) TEST EQUIPMENT AND MOCK-UPS	3	2	3

* Denotes less than 1 percent

TABLE 8

TASKS WHICH BEST DIFFERENTIATE BETWEEN 3- AND 5-SKILL LEVEL PERSONNEL
(PERCENT MEMBERS RESPONDING)

TASKS	DAFSC 32834 (N=315)	DAFSC 32854 (N=535)	DIFFERENCE
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	13	50	37
D102 CONDUCT OJT	10	43	33
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	12	41	29
D116 INSTRUCT PERSONNEL ON EQUIPMENT MAINTENANCE OR REPAIR TECHNIQUES	15	43	28
D107 DEMONSTRATE OPERATION OF EQUIPMENT	30	57	27
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	21	47	26
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY- RELATED PROBLEMS	4	29	25
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	7	31	24
D106 COUNSEL TRAINEES ON TRAINING PROGRESS	4	27	23
D113 EVALUATE PROGRESS OF TRAINEES	4	27	23
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	3	25	22
B55 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	3	25	22
F178 LAUNCH OR RECOVER AIRCRAFT	32	53	21
E137 MAINTAIN AF FORMS 2430 (SPECIALISTS DISPATCH CONTROL LOG)	23	43	20
A13 ESTABLISH WORK PRIORITIES	11	30	19
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	8	26	18
D101 CONDUCT JOB PROFICIENCY TRAINING	3	21	18
A3 COORDINATE WORK WITH OTHER SECTIONS	16	33	17
B34 DIRECT SHOP MAINTENANCE ACTIVITIES	5	22	16

TABLE 9

TASKS WHICH BEST DIFFERENTIATE BETWEEN 5- AND 7-SKILL LEVEL PERSONNEL
(PERCENT MEMBERS RESPONDING)

TASKS	DAFSC 32834 (N=535)	DAFSC 32854 (N=273)	DIFFERENCE
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	25	79	54
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	29	78	49
B50 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	18	65	47
B55 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	25	71	46
B49 INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	13	59	46
A23 SCHEDULE WORK ASSIGNMENTS	18	63	45
B25 BRIEF PERSONNEL ON MAINTENANCE MANAGEMENT DIRECTIVES OR PROCEDURES	14	59	45
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORDS)	31	74	43
B37 DRAFT CORRESPONDENCE	6	49	43
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	26	69	43
A18 PREPARE DUTY ROSTERS	9	52	43
A22 SCHEDULE LEAVES, PASSES OR TEMPORARY DUTY (TDY) TRIPS	5	45	40
A3 COORDINATE WORK WITH OTHER SECTIONS	33	72	39
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	12	51	39
C78 INDORSE AIRMAN PERFORMANCE REPORTS	7	45	38
B56 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS TECHNICIANS (AFSC 32874)	3	40	37
B27 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	8	45	37
B48 INITIATE CORRECTIVE ACTIONS BASED ON MAINTENANCE INSPECTIONS OR REPORTS	20	55	35
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	3	38	35

TABLE 10

EXAMPLES OF REPRESENTATIVE TASKS PERFORMED BY DAFSC 32834 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=315)
G212 SECURE OR SAFETY LRU IN AIRCRAFT	86
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS OR MOCKUPS, SUCH AS KNOBS OR LAMPS	85
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	84
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	81
G200 OPERATE INERTIAL AND RADAR NAVAGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	77
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	74
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	72
G197 ISOLATE MALFUNCTIONS TO RELAYS	68
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	65
G213 SOLDER AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	64
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	63
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	62
E164 TAG OR LABEL EQUIPMENT	62
G208 REMOVE OR REPLACE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM CONNECTORS	62
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	57
G323 REMOVE OR REPLACE INERTIAL COMPUTERS	57
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	57
F181 OPERATE POWER AGE	55
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IPB)	55
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	50
G201 PERFORM ON-EQUIPMENT QUALITY VERIFICATIONS	48
E150 MAKE ENTRIES ON MAINTENANCE HISTORICAL RECORDS	45

TABLE 11

EXAMPLES OF REPRESENTATIVE TASKS PERFORMED BY DAFSC 32854 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=535)
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	85
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	82
G212 SECURE OR SAFETY LRU IN AIRCRAFT	79
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS OR MOCKUPS, SUCH AS KNOBS OR LAMPS	78
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	76
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	76
G200 OPERATE INERTIAL AND RADAR NAVAGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	75
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	70
G197 ISOLATE MALFUNCTIONS TO RELAYS	70
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	69
G214 SPLICE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	67
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	64
G206 REMOVE OR INSTALL ACCESS PANELS	62
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	62
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	61
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	60
E164 TAG OR LABEL EQUIPMENT	58
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IPB)	58
D107 DEMONSTRATE OPERATION OF EQUIPMENT	57
J329 REMOVE OR REPLACE INU	56
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	56
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	54
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	54
F178 LAUNCH OR RECOVER AIRCRAFT	53
F181 OPERATE POWER AGE	51
G201 PERFORM ON-EQUIPMENT QUALITY VERIFICATIONS	51
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	50
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	47
D116 INSTRUCT PERSONNEL ON EQUIPMENT MAINTENANCE OR REPAIR TECHNIQUES	43

TABLE 12

EXAMPLES OF REPRESENTATIVE TASKS PERFORMED BY DAFSC 32874 PERSONNEL

TASKS	PERCENT MEMBERS PERFORMING (N=273)
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	79
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	78
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	77
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	74
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	74
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	74
A3 COORDINATE WORK WITH OTHER SECTIONS	72
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	69
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IPB)	67
B50 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	65
C81 INSPECT CONSOLIDATED TOOL KITS (CTK)	64
D102 CONDUCT OJT	64
D107 DEMONSTRATE OPERATION OF EQUIPMENT	63
A13 ESTABLISH WORK PRIORITIES	63
A23 SCHEDULE WORK ASSIGNMENTS	63
G200 OPERATE INERTIAL AND RADAR NAVAGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	63
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	62
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	62
D106 COUNSEL TRAINEES ON TRAINING PROGRESS	61
D113 EVALUATE PROGRESS OF TRAINEES	60
B25 BRIEF PERSONNEL ON MAINTENANCE MANAGEMENT DIRECTIVES OR PROCEDURES	59
D116 INSTRUCT PERSONNEL ON EQUIPMENT MAINTENANCE OR REPAIR TECHNIQUES	55
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	55
B48 INITIATE CORRECTIVE ACTIONS BASED ON MAINTENANCE INSPECTIONS OR REPORTS	55
B29 DIRECT FLIGHTLINE MAINTENANCE ACTIVITIES	53
C82 INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	52
B34 DIRECT SHOP MAINTENANCE ACTIVITIES	51
C66 EVALUATE COMPLIANCE WITH WORK STANDARDS	50

COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

Data on 3-, 5-, and 7-skill levels tasks were compared to the AFR 39-1 Specialty Descriptions for Avionic Inertial and Radar Navigation Systems Specialists (AFSC 32834/54) and Avionic Inertial and Radar Navigation Systems Technicians (AFSC 32874), dated 1 January 1982. These descriptions provide a broad overview of the duties and tasks performed by each skill level within the career ladder.

Based on the previously presented DAFSC analysis, the 3-, 5-, and 7-skill level specialty descriptions appear complete and accurately reflect the overall duties and responsibilities of these personnel. The 7-skill level description not only reflected supervisory responsibilities, but the maintenance duties, as well, which is appropriate.

ANALYSIS OF EXPERIENCE (TAFMS) GROUPS

An analysis was also made comparing tasks and job differences among individuals grouped by time in service (TAFMS) to determine how personnel utilization patterns change as experience increases. Table 13 provides a list of the relative amount of time spent on duties by members of each TAFMS group. As the level of experience increased, respondents spent slightly greater percentages of their job time performing supervisory and management functions. As indicated by the data in the table, there is a slight increase through the 193-240 months TAFMS period. Notably, the 241+ TAFMS group performed slightly less functions related to organizing and planning and inspecting and evaluating, while they performed slightly more functions related to directing and implementing, training, and maintenance management than the 193-240 group. The major emphasis of this job was technical; therefore, a majority of the job time of most enlistment groups, except the 193-240 and 241+, was largely devoted to technical functions.

First-Enlistment Personnel

Figure 2 presents a distribution of first-term 328X0 respondents across job groups identified in the Specialty Jobs Section of this report. As illustrated in Figure 2, first-enlistment personnel participated in a full range of avionic inertial and radar navigation systems activities and were members of most of the technically-oriented job. Enroute MADAR Repair Personnel, Sections Chiefs and Supervisors, Flightline Supervisors, OJT Managers, and Quality Control Inspectors are the only groups having no first-enlistment representatives. Table 14 provides examples of some of the tasks commonly performed by airmen with 1-48 months TAFMS. The common tasks performed by first-enlistment personnel are administrative or general maintenance actions, such as AFTO Forms and remove or replace relays. The more specific technical tasks generally are performed by about 60 percent or less of all first-enlistment personnel. Systems-specific tasks are likely to be performed by only a third of the first-enlistment group or less, indicating that the jobs are fairly specialized by system. Of the 689 individuals making up the first-enlistment group, 38 percent fell into 1 specialty group, Doppler Systems Repair Personnel, while the remaining fell into variations of the other system-specific job groups.

Since the first job (1-24 months TAFMS) and first enlistment (1-48 months TAFMS) are the target population for initial skills training, this job diversity may be a problem. It may be very difficult to balance the need for system-specific training in a common 328X4 course. This will be the primary question for the ANALYSIS OF TRAINING in the next section of this report.

Before leaving the experience (TAFMS) groups, one other type of data should be examined. The job attitudes of incumbents, grouped into TAFMS categories, may provide insight into the status of this career field versus other specialties.

FIGURE 2
DISTRIBUTION OF FIRST-ENLISTMENT PERSONNEL
ACROSS JOB SPECIALTY GROUPS
(PERCENT MEMBERS RESPONDING, N=689)

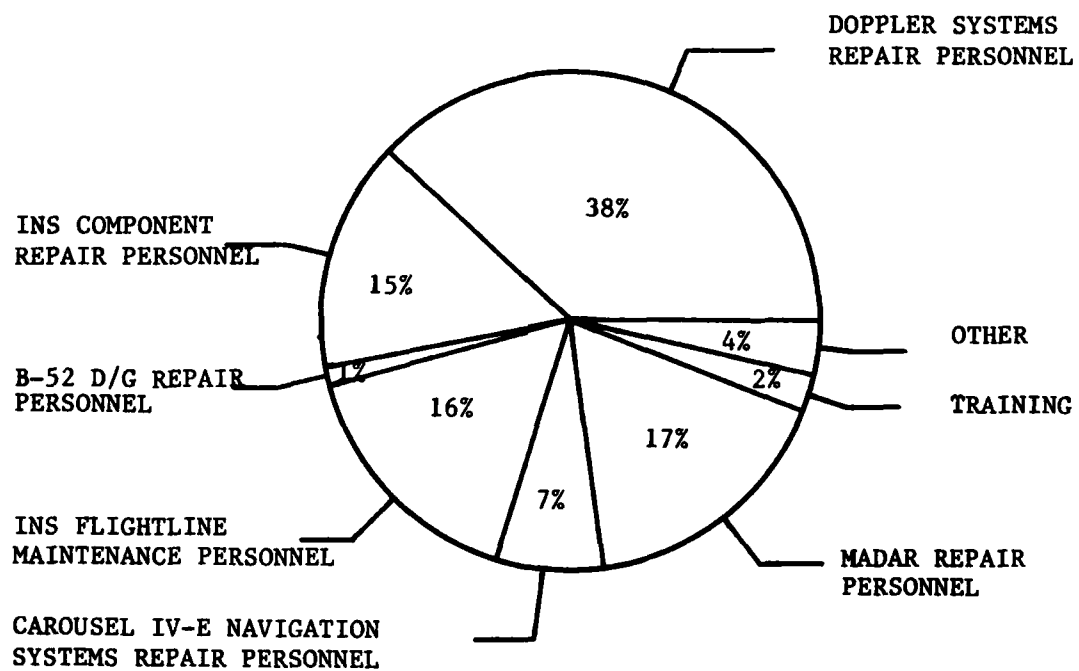


TABLE 13

RELATIVE PERCENT TIME SPENT ON DUTIES BY TAFMS GROUPS

DUTIES	1-48 (N=689)	49-96 (N=179)	97-144 (N=138)	145-192 (N=866)	193-240 (N=79)	241+ (N=22)
A ORGANIZING AND PLANNING	1	3	6	8	19	13
B DIRECTING AND IMPLEMENTING	1	5	9	15	16	19
C INSPECTING AND EVALUATING	2	6	8	12	19	18
D TRAINING	3	10	12	12	15	10
E PERFORMING MAINTENANCE MANAGEMENT FUNCTIONS	9	12	11	13	10	14
F PERFORMING AIRCRAFT GENERAL SUPPORT FUNCTIONS	5	4	5	5	3	3
G PERFORMING AVIONIC INERTIAL AND DOPPLER RADAR NAVIGATIONAL SYSTEM GENERAL MAINTENANCE FUNCTIONS	15	11	9	8	7	4
H MAINTAINING ON-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	6	6	4	4	3	2
I MAINTAINING OFF-EQUIPMENT DOPPLER RADAR NAVIGATIONAL SYSTEMS	8	6	5	4	3	2
J MAINTAINING ON-EQUIPMENT INERTIAL NAVIGATION SYSTEMS	18	13	11	8	5	5
K MAINTAINING OFF-EQUIPMENT/INERTIAL NAVIGATION SYSTEMS EQUIPMENT	6	5	4	2	4	2
L MAINTAINING ON-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM	3	3	2	*	1	1
M MAINTAINING OFF-EQUIPMENT DIGITAL MODULAR AVIONIC SYSTEM (DMAS)	1	1	1	*	1	1
N MAINTAINING ON-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS (SUCH AS ASN-6/7/7A OR ASN-35 & 46)	3	2	2	2	1	1
O MAINTAINING OFF-EQUIPMENT GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	3	3	2	1	1	*
P MAINTAINING ON-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	2	1	2	1	*	*
Q MAINTAINING OFF-EQUIPMENT WEAPONS RELEASE COMPUTER SYSTEMS (WRCS)	1	1	1	*	*	2
R MAINTAINING ON-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	*	*	*	*	*
S MAINTAINING OFF-EQUIPMENT OMEGA NAVIGATION SYSTEMS	*	*	*	*	-	*
T MAINTAINING ON-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	7	4	2	3	1	2
U MAINTAINING OFF-EQUIPMENT MALFUNCTION ANALYSIS DETECTION AND RECORDING (MADAR) SYSTEMS	3	1	*	*	-	1
V MAINTAINING ON-EQUIPMENT FUEL SAVINGS ADVISORY SYSTEM (FSAS)	*	*	*	-	-	*
W MAINTAINING CATEGORY II/PECULIAR (PEC) TEST EQUIPMENT AND MOCK-UPS	3	3	3	2	2	4

* Less than 1 percent

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY 328X4 FIRST-ENLISTMENT
(1-48 MOS) TAFMS GROUPS

TASKS	PERCENT MEMBERS PERFORMING (N=689)
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	86
G212 SECURE OR SAFETY LRU IN AIRCRAFT	86
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	84
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS OR MOCKUPS, SUCH AS KNOBS OR LAMPS	84
G200 OPERATE INERTIAL AND RADAR NAVAGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	79
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	78
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	78
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	77
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	76
G197 ISOLATE MALFUNCTIONS TO RELAYS	71
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	69
G214 SPLICE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	68
G211 REMOVE OR REPLACE RELAYS	67
G206 REMOVE OR INSTALL ACCESS PANELS	66
G208 REMOVE OR REPLACE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM CONNECTORS	65
G213 SOLDER AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	64
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	64
E164 TAG OR LABEL EQUIPMENT	63
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	61
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	60
J329 REMOVE OR REPLACE INU	59
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	59
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	58
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	58
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	57
F181 OPERATE POWER AGE	56
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IFB)	56
G215 TAPE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	54
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	53
G201 PERFORM ON-EQUIPMENT QUALITY VERIFICATIONS	51

Job Satisfaction

The main purpose of this section is to examine how job satisfaction indicators change with experience in the career ladder. Table 15 lists the job satisfaction summarized by experience groups, as well as for a comparative group made up of individuals in other recently surveyed similar ladders.

As illustrated in Table 15, slightly more 328X4 first-enlistment and second-enlistment (49-96) personnel find their jobs interesting than the first-enlistment and second-enlistment comparative sample group, while slightly less of the career group (97+) find theirs interesting than the comparative sample. The small differences here do not appear at all significant.

With progression in the career field, indicators of adequate use of talents are equal or slight greater for the first two enlistment groups and slightly greater for the comparative sample group. Reenlistment intentions steadily increased through all enlistment periods and are always greater when compared to similar comparative sample groups.

There are, however, substantial differences between this survey and others in the proportion of incumbents who feel their training is used effectively in their job and this trend is systematic for all of the TAFMS groups. Fewer 328X4 personnel feel their training is being used, which that current training (or its use) is a problem area. Thus, 328X4 training needs to be examined closely to define the cause of this difference in attitudes toward training.

TABLE 15

COMPARISON OF JOB SATISFACTION INDICATORS BY TAFMS GROUPS
(PERCENT MEMBERS RESPONDING)*

	1-48 MONTHS TAFMS		49-96 MONTHS TAFMS		97+ MONTHS TAFMS	
	328X0	COMPARATIVE SAMPLE	328X0	COMPARATIVE SAMPLE	328X0	COMPARATIVE SAMPLE
<u>EXPRESSED JOB INTEREST:</u>						
DULL	9	10	8	11	10	7
SO-SO	14	18	17	15	14	12
INTERESTING	76	70	74	72	75	79
NO RESPONSE	1	2	1	2	1	2
<u>PERCEIVED UTILIZATION OF TALENTS:</u>						
NOT AT ALL TO VERY LITTLE	21	20	22	18	22	15
FAIRLY WELL TO PERFECTLY	79	79	77	81	77	84
NO RESPONSE	0	1	0	1	1	1
<u>PERCEIVED UTILIZATION OF TRAINING:</u>						
NOT AT ALL TO VERY LITTLE	32	19	31	22	31	18
FAIRLY WELL TO PERFECTLY	68	80	69	77	68	81
NO RESPONSE	0	1	0	1	1	1
<u>REENLISTMENT INTENTIONS:</u>						
I WILL RETIRE	0	0	4	0	16	19
NO, OR PROBABLY NO	41	46	21	28	9	7
YES, OR PROBABLY YES	59	53	72	70	74	72
NO RESPONSE	0	1	3	1	1	1

* Comparative sample taken from mission equipment maintenance specialty reported in 1983 (N=8,361).
Includes AFSCs 305X4, 324X0, 328X5, 423X1, 423X5, and 464X0

ANALYSIS OF TRAINING

One of the major objectives of this project was to collect occupational data for use in reviewing initial skill training programs. The target population for such training programs are the 328X4 personnel who are in their first enlistment. A number of 7-skill level technicians rated the job inventory tasks in terms of which task should receive emphasis in structured training for first-term 328X4 personnel. Unfortunately, raters did not agree to an acceptable degree on which tasks should be trained (see discussion of Task Factor Administration in the SURVEY METHODOLOGY section). This disparity appeared to be due to the variation in functions performed (specialization) and lack of good agreement as to the need for training on certain tasks.

A second group of technicians provided task difficulty (TD) ratings (estimated of relative difficulty in learning of tasks). These raters had good agreement and the TD ratings are used in this analysis.

The lack of good consensus in TE ratings limits analysis of training documents and programs and may reflect the diverse systems maintained by members of the specialty. Consequently, this section will focus on identifying the tasks performed by first-enlistment personnel and task difficulty ratings to analyze the STS and POI.

Technical school personnel for the 328X4 career ladder at Keesler Technical Training Center, Keesler AFB, Mississippi, matched inventory tasks to appropriate sections of the STS and to the POI for Course 3ABR32834. The comparisons of data to training documents are based on this matching. Factors which can be used to evaluate training are the percent of first-enlistment members performing tasks, along with the task difficulty ratings (as discussed in the Task Factor Administration section). These factors were used to examine the 328X4 STS and POI for Course 3ABR32834. A complete computer listing displaying the percent members performing and task difficulty ratings for each task statement, along with POI and STS matchings, was forwarded to the technical school for their use in any further review of training documents.

Task Difficulty

The relative difficulty of each task in the inventory was assessed through ratings of 63 experienced Avionic Inertial and Radar Navigation Systems NCOs. These tasks were processed to produce an ordered listing of all tasks in terms of their relative difficulty and were standardized to have an average difficulty of 5.0, with a standard deviation equal to 1.

Table 16 lists examples of those tasks rated the highest by 328X4 task difficulty raters. These tasks are related to a variety of Avionic Inertial and Radar Navigation Systems functions and involves maintaining Category II peculiar (PEC) test equipment and mockup, performing INS and doppler systems general maintenance functions, maintaining on-equipment DMAS on

INS systems, inspecting and evaluating and maintaining on-equipment MADAR systems. Note that only two of the most difficult tasks are performed by more than 50 percent of first-enlistment 328X4 personnel, and these are troubleshooting (isolate malfunctions) tasks. The other difficult tasks are performed only by small percentages, which again reflects the diversity of first-enlistment jobs in the career field. Some of the tasks rated high in TD are supervisory and management tasks, such as evaluate budgets or financial requirements and write staff studies, surveys or special reports, which are, of course, not tasks for first-enlistment training.

Specialty Training Standard

The 328X4 STS dated December 1980 was compared with occupational data. Each paragraph was reviewed using task difficulty and percent members performing information. Given the diversity of first-enlistment jobs and the lack of agreement among TE raters, it is important to be able to see which job groups are performing the tasks matched to each STS area. Thus, the computer products used in this analysis (and provided to the school) also included percent performing for the six major first-enlistment jobs.

Generally, all broad categories of the STS had items referenced to them. Due to the diverse nature of the functions of the job groups identified in this field, many of the tasks matched to the STS were performed by small percentages of first-enlistment personnel in most of the job groups. Some of the subdivisions to the STS paragraphs had no tasks matched to them, while in other instances, tasks were matched only to the major paragraph headings. Some of these items are coded as performance objectives but have no tasks matched to them. These include items such as STS subparagraphs 10B(4) and 12B(4) Identify Defective Test Equipment (2B, 3C, 4C), which perhaps should be coded as a knowledge item (B, C, C), rather than as a performance item. Such areas should be reviewed to ascertain if codes should be changes.

There are some areas where the proficiency codes are dashed, yet sizeable percentages of first-enlistment personnel perform the functions. Some of these cannot be trained in the school because of equipment limitations (such as "operate other aircraft systems as necessary to check applicable equipment"). Paragraph 9B(7) "Use Common Test Equipment such as Time Domain Reflectometers" is coded 2B/-, 3C, and 4C, with an average of 71-86 percent of first-term groups performing (except Administrative Personnel). The dashed coding at the 3-skill level indicates that specific paragraph is not taught at the technical school; this is a situation requiring review in light of the high percentages of first-enlistment personnel performing.

Finally, survey data generally supported the present STS. Table 17, however, displays technical tasks not matched to the STS which are performed by major job groups. Many of these unmatched tasks involve specialized programs, such as MADAR and are being performed mostly by members of relative small job types, such as the MADAR group, which consists of 166 personnel or about 14 percent of the career field. Although performed by few 328X4 first-enlistment personnel overall, their performance by members of an identified job type suggests they could justifiably be added to the STS (at least in some generic sense).

TABLE 16

EXAMPLE OF TASKS RATED HIGHEST IN TASK DIFFICULTY

TASKS	FIRST ENLISTMENT	
	TASK DIFF	PERCENT MEMBERS PERFORMING
W629 CALIBRATE SYSTEM PERFORMANCE TEST SETS (SPTS)	8.06	5
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	7.44	78
W712 ISOLATE MALFUNCTIONS TO SPTS COMPONENTS	7.32	5
W768 REPAIR SPTS SRU OR COMPONENTS	7.23	3
L397 BORESIGHT IMU MOUNTS	7.19	1
D128 WRITE OR REVISE CAREER DEVELOPMENT COURSES (CDC)	7.05	*
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	7.02	69
C65 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	7.01	1
C67 EVALUATE ENGINEERING CHANGE PROPOSALS	7.00	2
C97 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS, OTHER THAN TRAINING REPORTS	6.98	1
H216 BORESIGHT DOPPLER SENSOR ANTENNAS OR MOUNTS	6.97	7
L396 ALIGN INERTIAL MEASUREMENT UNIT (IMU) MOUNTS	6.93	5
B500 ISOLATE MALFUNCTIONS TO WRCS PYLON WIRING	6.93	6
W703 ISOLATE MALFUNCTIONS TO MICROWAVE TEST FIXTURE SRU COMPONENTS	6.86	1
W689 ISOLATE MALFUNCTIONS TO ASM-445 PROJECTED MAP DISPLAY TEST SET SRU COMPONENTS	6.74	*
W683 ISOLATE MALFUNCTIONS TO ASM-217 ELECTRONIC CIRCUIT PLUG-IN UNIT TEST SET SRU COMPONENTS	6.73	1
W623 CALIBRATE ASN-225 COMPASS TEST SETS	6.72	2
J297 ISOLATE MALFUNCTIONS TO INERTIAL JUNCTION BOX COMPONENTS, SUCH AS RESISTORS, DIODES, RELAYS, OR CAPACITORS	6.71	32
W761 REPAIR MICROWAVE TEST FIXTURE SRU COMPONENTS	6.65	1
B36 DIRECT SUPPORT FOR OFF-SHORE AIRCRAFT MAINTENANCE STATIONS	6.61	1
G207 REMOVE OR REPLACE AIRCRAFT WIRING HARNESSSES	6.60	23
W688 ISOLATE MALFUNCTIONS TO ASM-445 PROJECTED MAP DISPLAY TEST SET SRU	6.60	*
T571 TEACH MADAR TROUBLESHOOTING TECHNIQUES	6.59	15
W682 ISOLATE MALFUNCTIONS TO ASM-217 ELECTRONIC CIRCUIT PLUG-IN UNIT TEST SET SRU	6.56	1

* Indicates less than .5 percent members performing

Task difficulty mean = 5.0
Standard deviation = 1.0

TABLE 17

TASKS NOT REFERENCED TO STS
(PERCENT MEMBERS PERFORMING)

TASKS	TASK DIFF	INS COM	INS FLT	DOPPLER	CAR IV-E	MADAR	ADM SUP
L397 BORESIGHT IMU MOUNTS	7.19	8	1	*	0	0	0
T571 TEACH MADAR TROUBLESHOOTING TECHNIQUES	6.59	0	0	2	0	78	9
U603 ISOLATE MALFUNCTIONS TO MADAR ODRU SRU	6.52	1	0	0	0	43	1
U599 ISOLATE MALFUNCTIONS TO MADAR CSU SRU	6.26	1	0	0	0	43	1
U600 ISOLATE MALFUNCTIONS TO MADAR DRU SRU	6.23	1	0	*	0	43	1
U597 ISOLATE MALFUNCTIONS TO MADAR CMA SRU	6.17	1	0	0	0	42	1
U583 ALIGN MADAR ODRU	6.13	1	0	0	0	34	1
U577 ADJUST MADAR ODRU	6.00	0	0	*	0	42	1
U579 ALIGN MADAR CSU	5.90	0	0	0	0	33	1
U580 ALIGN MADAR DRU	5.84	0	0	*	0	40	1
U605 ISOLATE MALFUNCTIONS TO MADAR SAR SRU	5.83	1	0	0	0	43	1
V609 ISOLATE FSAS MALFUNCTIONS TO ASSOCIATED INTERFACE SYSTEMS OR EQUIPMENT	5.78	1	0	0	0	1	0
V610 ISOLATE MALFUNCTIONS TO FSAS DIGITAL INTERFACE CONTROL UNITS (DICU)	5.78	1	0	0	0	1	0
V611 ISOLATE MALFUNCTIONS TO FSAS FUEL SAVINGS COMPUTERS (FSC)	5.78	1	0	0	0	1	0
V612 ISOLATE MALFUNCTIONS TO FSAS RELAY RACK COMPONENTS, SUCH AS RESISTORS, DIODES, OR RELAYS	5.78	1	0	0	0	1	0
V613 ISOLATE MALFUNCTIONS TO FSAS/INS CONTROL AND DISPLAY UNITS (CDU)	5.78	0	0	*	0	1	0
U601 ISOLATE MALFUNCTIONS TO MADAR MDR SRU	5.76	1	0	*	0	40	1
U602 ISOLATE MALFUNCTIONS TO MADAR MMUX SRU	5.76	1	0	0	0	41	1
U598 ISOLATE MALFUNCTIONS TO MADAR COMPUTER SRU	5.75	1	0	0	0	42	1
U575 ADJUST MADAR MDR	5.75	0	0	*	0	40	1
U581 ALIGN MADAR MDR	5.75	1	0	0	0	33	1
U574 ADJUST MADAR DRU	5.73	0	0	*	0	46	1
U604 ISOLATE MALFUNCTIONS TO MADAR POU SRU	5.68	1	0	0	0	42	1
U576 ADJUST MADAR MMUX	5.65	0	0	0	0	37	1

TABLE 17 (CONTINUED)

TASKS NOT REFERENCED TO STS
(PERCENT MEMBERS PERFORMING)

TASKS	TASK DIFF	INS COM	INS FLT	DOPPLER	CAR IV-E	MADAR	ADM SUP
U573 ADJUST MADAR SCU	5.63	0	0	*	0	39	1
U582 ALIGN MADAR MMUX	5.58	1	0	*	0	31	1
U592 BENCH CHECK MADAR ODRU	5.56	1	0	0	0	45	1
U572 ADJUST MADAR CMA	5.54	0	0	0	0	39	1
U578 ALIGN MADAR CMA	5.54	0	0	0	0	32	1
0607 ISOLATE MALFUNCTIONS TO SCM SRU	5.49	1	0	0	0	33	1
U588 BENCH CHECK MADAR SCU	5.46	1	0	0	0	44	1
U585 ALIGN MADAR SCM	5.37	1	0	0	0	31	1
U596 BENCH CHECK MADAR SCM	5.37	1	0	0	0	36	1
U589 BENCH CHECK MADAR DRU	5.29	1	0	0	0	44	1
U587 BENCH CHECK MADAR COMPUTERS	5.27	1	0	0	0	44	1
U595 BENCH CHECK MADAR SCA	5.27	1	0	0	0	41	1
U593 BENCH CHECK MADAR POU	5.11	1	0	0	0	43	1
U590 BENCH CHECK MADAR MDR	5.20	1	0	0	0	41	1

* Indicates less than .5 percent members performing

Task difficulty mean = 5.0
Standard deviation = 1.0

Plan of Instruction

The 25-week Avionic Inertial and Radar Navigation Systems course is a basic course intended to train beginners in an electronics-oriented career field. The program includes principles of electronics and methods for malfunction analysis and detection, isolation of malfunctions, and repair of various INS systems and components. As 328X4 personnel gain in experience, other courses are available to train them for more specialized functions such as special equipment repair. The various systems maintained by 328X4 personnel throughout the career field must require a great deal of system unique training.

The inventory for this survey included 778 tasks, but only approximately 85 tasks were performed by 30 percent or more 1-48 TAFMS personnel (see Table 14 in TAFMS section for examples). Consequently, personnel who review the POI should keep in mind that low percentages perform most tasks because of the varied missions of this career field. In this case, close attention should be given to the limited number of tasks first-enlistment personnel perform in common and the variety of systems they maintain.

There were numerous areas of the basic course where task data indicates less than 30 percent of first-enlistment (1-48 month TAFMS) personnel are performing associated tasks. The task list is somewhat detailed, covering a variety of INS systems. All tasks should be reviewed carefully to determine if training is appropriate with limited number of 328X4 personnel performing in their present jobs. Because of the low percent members performing limited jobs performed by the first-term members, consideration should be given to increasing basic electronics and less involvement in the more system-related functions.

Some tasks performed by 30 percent or more of the 1-48 months TAFMS personnel were not matched to any portion of the entire course POI. Table 18 displays these tasks for training personnel review. Some of these tasks received low task difficulty ratings, indicating that those items may not require detailed training in a formal training course. Other items may warrant consideration for inclusion based on percent members performing. An indepth review of this list of tasks and the complete listing in the training extract may indicate a need for additional modifications in an attempt to provide more effective entry-level training.

TABLE 18

TASKS NOT REFERENCED TO POI 328X4 PERFORMED BY AT LEAST
30 PERCENT OF FIRST-TERMERS

TASKS	TASK DIFF	PERCENT MEMBERS PERFORMING	
		FIRST- JOB	FIRST- ENLISTMENT
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	7.02	66	69
J297 ISOLATE MALFUNCTIONS TO INERTIAL JUNCTION BOX COMPONENTS, SUCH AS RESISTORS, DIODES, RELAYS, OR CAPACITORS	6.71	31	32
J311 ISOLATE MALFUNCTIONS TO RELAY PANELS	6.37	31	33
J290 ISOLATE MALFUNCTIONS TO CAROUSEL IV-E RELAYS, ANNUNCIATORS, OR SWITCHES	5.84	46	46
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	5.84	75	78
J296 ISOLATE MALFUNCTIONS TO INERTIAL JUNCTION BOXES	5.72	40	40
J302 ISOLATE MALFUNCTIONS TO LEDEX RELAYS	5.58	40	40
J315 PERFORM GYRO BIAS	5.09	30	32
N451 ISOLATE MALFUNCTIONS TO GENERAL-PURPOSE OR NAVIGATIONAL COMPUTER CONTROL INDICATORS	5.00	29	31
J306 ISOLATE MALFUNCTIONS TO NAVIGATION UNITS (NU)	4.88	45	47
G201 PERFORM ON-EQUIPMENT QUALITY VERIFICATIONS	4.87	50	51
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	4.85	55	58
G126 ISOLATE MALFUNCTIONS TO COOLING SYSTEMS	4.79	33	37
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	4.71	80	79
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATIONAL UNITS (INU)	4.71	64	64
G204 PERFORM QUALITY ASSURANCE CHECKS	4.69	34	37
J299 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION SYSTEMS (MSU)	4.67	31	31
J304 ISOLATE MALFUNCTIONS TO MODE SELECT UNITS (MSU)	4.67	56	57
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	4.56	61	59
G209 REMOVE OR REPLACE COOLING SYSTEMS COMPONENTS	4.50	27	31
G213 SOLDER AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	4.46	63	64

TABLE 18 (CONTINUED)

TASKS NOT REFERENCED TO POI 328X4 PERFORMED BY AT LEAST
30 PERCENT OF FIRST-TERMERS

TASKS	TASK DIFF	PERCENT MEMBERS PERFORMING	
		FIRST- JOB	FIRST- ENLISTMENT
F178 LAUNCH OR RECOVER AIRCRAFT	4.39	40	47
H234 REMOVE OR REPLACE DOPPLER SENSOR ANTENNAS	4.37	36	35
G211 REMOVE OR REPLACE RELAYS	4.30	65	68
D107 DEMONSTRATE OPERATION OF EQUIPMENT	4.28	33	42
J331 REMOVE OR REPLACE LEDEX RELAYS	4.27	36	38
G214 SPLICE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	4.21	65	68
J343 REPROGRAM INS DIGITAL COMPUTERS	4.16	34	36
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	4.13	21	31
J289 ISOLATE MALFUNCTIONS TO BATTERY UNITS (BU)	3.95	50	50
C84 INSPECT PARTS RECEIVED FROM SUPPLY OR MANUFACTURERS	3.81	40	43
K364 BENCH CHECK MODE SELECT UNITS	3.69	34	32
F181 OPERATE POWER AGE	3.43	55	56
J336 REMOVE OR REPLACE NAVIGATION UNITS (NU)	3.41	44	44
N460 REMOVE OR REPLACE GENERAL-PURPOSE OR NAVIGATIONAL COMPUTER CONTROL INDICATORS	3.37	29	30
F180 OPERATE OR SERVICE MAINTENANCE DISPATCH VEHICLES	3.29	31	33
C81 INSPECT CONSOLIDATED TOOL KITS (CTK)	3.26	41	43
J329 REMOVE OR REPLACE INU	3.21	60	59
F179 OPERATE NONPOWERED AEROSPACE GROUND EQUIPMENT (AGE)	3.14	37	41
G193 INSPECT COOLING SYSTEMS	2.93	33	34
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	2.83	54	53
G215 TAPE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	2.82	51	54
E150 MAKE ENTRIES ON MAINTENANCE HISTORICAL RECORDS	2.79	45	45
E137 MAINTAIN AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	2.62	55	58
J333 REMOVE OR REPLACE MODE SELECT UNITS (MSU)	2.61	55	55
G194 INSPECT SHOCK MOUNTS	2.61	44	46
G206 REMOVE OR INSTALL ACCESS PANELS	2.54	66	66
G212 SECURE OR SAFETY LRU IN AIRCRAFT	2.36	90	86

Task difficulty mean = 5.0
Standard deviation = 1.0

ELECTRONICS PRINCIPLES INVENTORY (EPI)

One other source of information for 328X4 training developers is the recently completed electronics principles inventory (EPI). The EPI is a knowledge-based job inventory which identifies the range of electronics principles personnel need to perform any electronics-oriented job. Table 19 displays the percent of 32854 personnel reporting use of electronics principles as part of their jobs. Examples of subject areas used by 50 percent or more of the 168 survey respondents included A/C D/C current, transistors, soldering or solderless connections, meter movements, multivibrators, and limiters and claspers. The full list shown in Table 19 reflects the variation of jobs with 22 of the available 56 areas used by 50 percent or more of 328X4 personnel on the job. These subject areas provide a picture of the depth of involvement of 328X4 personnel with electronics principles.

TABLE 19

ELECTRONICS PRINCIPLES INVENTORY (EPI) PERCENTAGE OF
328X4 PERSONNEL USING PRINCIPLES

SUBJECT AREA	PERCENT USING (N=168)
DIRECT CURRENT	97
RESISTANCE AND RESISTIVE CIRCUIT	96
METERS/MULTIMETERS	93
ALTERNATING CURRENT	81
METER MOVEMENTS	79
RELAYS	77
MATHEMATICS	76
RCL CIRCUITS	76
OSCILLOSCOPES	75
SOLDERING OR SOLDERLESS CONNECTIONS	75
ELECTRON TUBES	73
FILTERS	73
MULTIVIBRATORS	70
CAPACITORS AND CAPACITIVE REACTANCE	65
COMPUTER, MICROPROCESSORS, AND PROGRAMMING	64
POWER SUPPLIES	62
SOLID-STATE SPECIAL PURPOSE DEVICES	60
LOGIC FUNCTIONS	59
LIMITERS AND CLAMPERS	57
TRANSFORMERS	53
COUNTERS	53
USE OF SIGNAL GENERATORS	51
TRANSISTORS	49
CABLE FABRICATION	45
DIGITAL-TO-ANALOG/ANALOG-TO-DIGITAL CONVERTERS	44
NUMBERING SYSTEMS	43
INPUT/OUTPUT (PERIPHERAL) DEVICES	42
TIMING CIRCUITS	38
HETERODYNING AND MODULATION-DEMODULATION (MODEMS)	38
MOTORS AND GENERATORS	38
WAVESHAPING CIRCUITS	36
TIME CONSTANTS	36
TRANSISTOR AMPLIFIERS	35
SPECIAL PURPOSE ELECTRON TUBES	32
OSCILLATORS	32
COUPLING	30
SCHMITT TRIGGERS	27
MAGNETISM	26
DB AND POWER RATIOS	25
ELECTRON TUBE AMPLIFIERS AND CIRCUITS	23
MICROPHONE AND SENSING DEVICES	18
PHANTOSTRON	12
SATURABLE REACTORS AND MAGNETIC AMPLIFIERS	10

ANALYSIS OF MAJOR COMMAND DIFFERENCES

Another possible dimension along which jobs performed by respondents may vary is mission as reflected by Major Command (MAJCOM). Consequently, the seven major user commands of the 328X4 incumbents are examined in terms of tasks performed, aircraft worked on, systems maintained, background characteristics, and job satisfaction. The seven commands examined are TAC, MAC, SAC, AFSC, USAFE, PACAF, and ATC. These seven major commands comprise 98 percent of the 328X4 sample. The overall job of performing both in-shop and flightline maintenance on Avionics Inertial and Radar Navigation Systems are fairly similar across commands, with the exception of ATC, which is involved primarily with the training function. The main differences between 328X4 personnel in the remaining commands are the aircraft and/or specific systems maintained. Tables 20 through 24 provide data for the MAJCOM groups. For an overall view of how the jobs vary among MAJCOM groups, Table 20 lists the MAJCOM distribution across the job groups identified in the career ladder structure. Note that Administrative and Supervisory jobs are distributed across all commands, others, such as Trainers or the MADAR cluster, are concentrated primarily in one command.

Job satisfaction indicators (see Table 21) job interest and perceived utilization of talents for all command groups are fairly high (50 percent or more). Perceived use of training is systematically lower for MAC, USAFE, and PACAF, which suggests possible problems in applicability of training for incumbents in these commands. Further discussions of each command group follow.

MAC

The 375 members of MAC responding to the survey account for 34 percent of the sample. They have an average grade of E-4 and 62 percent are in their first enlistment. MAC personnel worked on both doppler and INS systems performing both flightline and in-shop maintenance and are involved primarily with C-5A, A-10, C-130S, and C-141A/B aircraft (see Table 22). MADAR functions are a specialized mission of MAC personnel.

TAC

Consisting of 274 individuals (23 percent of the survey sample), these members maintained both doppler and INS systems and performed both in-shop and flightline maintenance. TAC is the only command that maintains the APN-213 doppler systems (see Table 23). Other INS systems maintained include APN-101, ASN-56, ASN-63, and Carousel IV-E. Of the special systems, the omega navigation systems are maintained by TAC personnel only, and stellar inertial doppler systems are maintained by TAC and USAFE (see Table 24). TAC personnel maintain RF-4C, E-3A, F-4D/E, and F-4C, and A-10. These personnel have an average grade of E-4 and 65 percent are in their first enlistment.

AFSC

This command reflects a small representation (2 percent) of the survey sample. AFSC personnel maintain both doppler and INS systems and perform both in-shop and flightline maintenance. Systems maintained included APN-218, and APN-147 doppler systems, and APN-101, APN-56, APN-63, APN-65, LN-39, LN-51, Carousel IV-E and palletized INS. Special systems maintained include digital modulators, INS Inertial REF systems-IRS, navigation computer and weapon release computer systems. AFSC personnel maintain systems on RF-4C, EC-135C/K, RC-135E/M/S/U/V, C-135A/B, KC-135A/Q/R/T, F-4D/E, F-4C, A-10, C-130/A/B/D/E, NKC-135, and C-141. Only 42 percent of AFSC personnel are in their first enlistment (versus 65 percent for TAC and 62 percent for MAC).

USAFE

The 115 respondents (10 percent of sample) assigned to USAFE reported performing functions involving only three of the identified jobs (see Table 20): INS Components Repair Personnel, Doppler Systems Repair Personnel, and Administrative and Supervisors. USAFE personnel work on both doppler and INS systems which involve RF-4C, EC-135C/K, RC-135E/M/S/U/V, C-135A/B, KC-135A/B, F-4D/E, WC-130B/E/H, and HC-130H/N/P. Special systems worked on by these members were digital modulator avionic systems, INS Inertial REF systems-IRS, navigation computer, stellar inertial doppler, and weapon release computer system. Fifty-one percent are in their first enlistment, with an average grade of E-4.

PACAF

This is the smallest representation of all major commands discussed, with 21 incumbents. PACAF personnel maintained both doppler and INS systems in in-shop and flightline environments. These personnel work on the APN-218 and APN-147 doppler systems and a variety of INS systems which are involved with several aircraft models (see Tables 22 and 23). Digital modulator avionic system, INS inertial REF system-IRS, navigation computer, and weapon release computer system are special systems worked on by PACAF personnel. Four of the jobs identified by the job structure analysis were performed by PACAF personnel: INS component repair, INS flightline maintenance, doppler system repair, and administration and supervision. Twenty-nine percent are in their first enlistment, and their average grade is E-4.

SAC

The 263 individuals responding to the survey who are assigned to SAC report maintaining both doppler and INS systems. Those systems included APN-81, 89, 89A, 99, 213, and 93 doppler systems and LN-20 (ASN-121), LN-33, NAS-14V2, Carousel IV-E INS systems and are involved with a variety

of aircraft (see Table 22). SR-71/AC, U-2A/B/D/R and TR-1A/B aircraft and astro INS special systems and are maintained only by SAC personnel. Sixty-two percent of SAC respondents are in their first enlistment with an average grade of E-4.

ATC

The ATC group is comprised of 63 individuals, consisting mainly of resident technical and field training detachment (FTD) course instructors. This group has an average grade of E-4 with the highest (109) average number of months of experience of all major commands discussed. The primary functions of ATC personnel is training; they indicate a familiarity with both doppler and INS systems. Most of the systems worked on are special equipment used in support of training.

Summary

The jobs performed by major commands are technically similar (except the ATC group, which is concerned mainly with training). The main differentiating factor is the avionic INS systems and aircraft models worked on. Task differences tend to be due to systems worked on or specialized jobs performed by major commands (MADAR, Astro INS). Job satisfaction indicators are the highest for AFSC and the lowest for USAFE (see Table 21).

TABLE 20

DISTRIBUTION OF MEMBERS OF EACH JOB GROUP WITHIN EACH MAJOR COMMAND
(PERCENT)

	<u>MAC</u>	<u>TAC</u>	<u>SAC</u>	<u>AFSC</u>	<u>USAFE</u>	<u>PACAF</u>	<u>ATC</u>	<u>OTHERS</u>
INS COMPONENT REPAIR CLUSTER (GRP043, N=155)	-	57	-	10	28	3	*	2
INS FLIGHTLINE MAINTENANCE PERSONNEL (GRP039, N=161)	2	69	2	-	20	3	-	4
DOPPLER SYSTEMS REPAIR PERSONNEL (GRP044, N=493)	38	8	46	1	4	1	2	-
CAROUSEL IV-E NAVIGATION SYSTEM REPAIR (GRP067, N=74)	62	28	7	-	-	-	-	3
B-52G/H REPAIR PERSONNEL (GRP052, N=9)	-	-	78	-	-	-	-	22
SPECIAL EQUIPMENT TECHNICIANS (GRP094, N=7)	14	29	28	-	-	-	29	-
MADAR SYSTEMS REPAIR CLUSTER (GRP054, N=166)	99	-	-	-	-	-	1	-
ADMINISTRATIVE AND SUPERVISORY CLUSTER (GRP018, N=105)	29	20	11	4	17	5	8	6
TRAINING PERSONNEL (GRP008, N=38)	-	-	-	-	-	-	100	-

* Less than 1 percent

TABLE 21

**JOB SATISFACTION INDICES FOR MAJOR COMMANDS
(PERCENT MEMBERS RESPONDING)**

	<u>MAC</u> <u>(N=395)</u>	<u>TAC</u> <u>(N=274)</u>	<u>SAC</u> <u>(N=263)</u>	<u>AFSC</u> <u>(N=26)</u>	<u>USAFE</u> <u>(N=115)</u>	<u>PACAF</u> <u>(N=21)</u>	<u>ATC</u> <u>(N=63)</u>
<u>EXPRESSED JOB INTEREST:</u>							
DULL	11	9	6	-	15	14	3
SO-SO	12	19	14	12	15	14	10
INTERESTING	77	71	79	88	70	72	86
NOT REPORTED	-	1	1	-	-	-	1
<u>PERCEIVED UTILIZATION OF TALENTS:</u>							
LITTLE OR NOT AT ALL	20	25	14	12	34	33	14
FAIRLY WELL OR BETTER	80	74	85	88	66	67	86
NOT REPORTED	*	1	1	-	-	-	-
<u>PERCEIVED UTILIZATION OF TRAINING:</u>							
LITTLE OR NOT AT ALL	36	29	28	12	44	33	13
FAIRLY WELL OR BETTER	63	71	72	88	56	67	87
NOT REPORTED	1	*	-	-	-	-	-
<u>REENLISTMENT INTENTIONS:</u>							
PLAN TO RETIRE	4	5	4	-	7	10	10
NO, OR PROBABLY NO	32	30	32	4	33	19	11
YES, OR PROBABLY YES	63	65	64	96	60	71	76
NOT REPORTED	1	-	-	-	-	-	3

TABLE 22

AIRCRAFT MAINTAINED BY AT LEAST 10 PERCENT OF MAJOR COMMAND GROUPS
(PERCENT MEMBERS PERFORMING)*

<u>AIRCRAFT</u>	<u>SAC</u>	<u>TAC</u>	<u>AFSC</u>	<u>USAFE</u>	<u>ATC</u>	<u>MAC</u>	<u>PACAF</u>
SR-71A/C	14	-	-	-	-	-	-
U-2A/B/D/R	11	-	-	-	-	-	-
TR-1A/B	11	-	-	-	-	-	-
RF-4C	-	21	61	17	-	-	33
EC-130E/H	-	-	-	-	11	-	10
EC-135C/K	17	-	12	-	-	-	19
RC-135E/M/S/U/V	22	-	10	14	-	-	10
VC-135	-	-	-	-	-	-	19
E-3A	-	12	-	-	-	-	-
E-4A/B	11	-	-	-	-	-	-
C-5A	-	-	-	-	-	60	-
C-135A/B	-	-	15	10	-	-	14
KC-135A/Q/R/T	91	-	12	17	-	-	19
KC-135A/B	-	-	-	-	-	-	14
F-4D/E	-	52	69	48	-	-	52
F-4G	-	10	-	-	-	-	24
F-4C	-	-	-	31	-	-	-
B-52G/H	42	-	10	-	-	-	-
WC-130B/E/H	-	-	-	10	11	10	10
A-10	-	10	65	22	-	-	10
HC-130H/N/P	-	-	10	10	-	10	10
C-130A/B/D/E	-	-	19	13	-	34	19
NKC-135	-	-	35	10	-	-	-
C-141A/B	-	-	27	-	-	65	10

* Columns will total more than 100 percent due to multiple responses

TABLE 23

SYSTEMS MAINTAINED BY AT LEAST 10 PERCENT OF MAJOR COMMAND GROUPS
(PERCENT MEMBERS PERFORMING)

	<u>SAC</u>	<u>TAC</u>	<u>AFSC</u>	<u>USAFE</u>	<u>ATC</u>	<u>MAC</u>	<u>PACAF</u>
<u>DOPPLER SYSTEMS</u>							
APN-81	27	-	-	-	-	-	-
APN-89	31	-	-	-	-	-	-
APN-89A	24	-	-	-	-	-	-
APN-99	10	-	-	-	-	-	-
APN-213	-	11	-	-	-	-	-
APN-218	93	3	30	17	11	-	14
APN-147	-	-	19	13	13	39	27
<u>NAVIGATION SYSTEMS</u>							
ARN-101	-	31	54	39	-	-	33
ASN-24	-	-	-	-	-	10	-
ASN-56	-	22	65	11	14	-	43
ASN-63	-	48	69	47	11	-	62
ASN-48	-	-	65	-	10	-	-
LN-20 (ASN-121)	21	-	-	12	-	-	-
LN-33	11	-	-	-	-	-	-
LN-39	-	-	15	9	-	-	-
LTN-51	-	-	23	-	-	-	-
NAS-14V2	14	-	-	-	-	-	-
CAROUSEL IV-E	92	10	35	17	13	72	19
PALLETIZED INS	-	-	19	-	-	-	19
<u>NAVIGATION COMPUTERS</u>							
ASN-45C	-	-	15	9	-	-	-
ASN-35	-	-	19	12	13	33	19
ASN-7	21	-	-	-	-	-	-
ASN-7A	11	-	-	-	-	-	-
ASN-46	-	29	31	24	11	-	24
ASN-46A	-	45	58	37	-	-	33
ASN-35C	-	-	-	-	13	10	14
DNC	88	-	37	17	-	-	14

TABLE 24

SPECIAL SYSTEMS USED BY MAJOR COMMAND GROUPS
(PERCENT MEMBERS PERFORMING)

<u>SPECIAL SYSTEMS</u>	<u>SAC</u>	<u>TAC</u>	<u>AFSC</u>	<u>USAFE</u>	<u>ATC</u>	<u>MAC</u>	<u>PACAF</u>
ASTRO INS	14	-	-	-	-	-	-
DIGITAL MODULATOR AVIONIC SYSTEMS	-	30	43	38	-	-	33
INS INERTIAL REF SYSTEMS-IRS	56	46	46	41	19	44	19
NAVIGATION COMPUTER	44	51	65	44	16	30	38
MADAR	-	-	-	-	-	51	-
OMEGA NAV SYS	-	11	-	-	-	-	-
STELLAR INERTIAL DOPPLER	-	12	-	12	-	-	-
WEAPON RELEASE COMPUTER SYSTEMS	-	45	54	43	14	-	43

ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

Comparisons between the functions performed and background data of airmen assigned overseas versus those assigned within CONUS can provide useful information for trainers and managers.

An analysis of task performance differences between the 405 5-skill level incumbents assigned within CONUS and the 129 5-skill level incumbents stationed overseas reveals very few differences between the two groups. On the average, CONUS members performed 108 tasks, compared to 116 for their counterparts overseas.

Table 25 lists those tasks showing the greatest difference in percent members performing. As shown, tasks related to OJT, battery units, cooling systems, ISN systems connectors, MSU and inertial and doppler preventive maintenance are performed by larger percentages of CONUS members. A larger percentage of overseas members perform tasks related to access panels, launching and recovering aircraft, refueling and defueling aircraft, and repairing general purpose navigation computers.

In general, the differences are relatively small. Where there is some difference, it may be a function of mission (tactical versus airlift or strategic) or MAJCOM.

TABLE 25

TASKS WHICH BEST DIFFERENTIATE BETWEEN
CONUS/OVERSEAS PERSONNEL
(PERCENT MEMBERS PERFORMING)

<u>TASKS</u>	<u>CONUS</u>	<u>OVERSEAS</u>	<u>DIFF</u>
D102 CONDUCT OJT	47	32	+15
J317 REMOVE OR REPLACE BATTERY UNITS	52	37	+15
G209 REMOVE OR REPLACE COOLING SYSTEM COMPONENTS	35	21	+14
G208 REMOVE OR REPLACE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM CONNECTORS	65	51	+14
J333 REMOVE OR REPLACE MODE SELECTOR UNITS (MSU)	54	41	+13
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATION SYSTEMS	72	59	+13
J331 REMOVE OR REPLACE LEDDEX RELAYS	43	30	+13
.	.	.	.
.	.	.	.
.	.	.	.
G206 REMOVE OR INSTALL ACCESS PANELS	59	74	-15
F178 LAUNCH OR RECOVER AIRCRAFT	50	64	-14
F185 REFUEL OR DEFUEL AIRCRAFT	13	27	-14
N455 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SYSTEMS INDICATORS	20	34	-14
O489 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGA- TIONAL COMPUTER (SRU)	19	33	-14
F187 SERVICE AIRCRAFT WITH HYDRAULIC FLUID, AIR OIL	5	19	-14
O469 ALIGN GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	20	33	-13

COMPARISON TO PREVIOUS SURVEYS

Results of this survey were compared to the results of OSR AFPT 90-328-265 (Avionic Inertial and Radar Navigation Systems career ladder) dated 28 April 1978. Comparisons were made to career ladder structure (Table 26) and job satisfaction indicators by TAFMS group (Table 27). Findings in the 1978 OSR were slightly different from the present findings. The career ladder structure analysis identified all jobs identified in the previous survey and several other more specialized jobs, such as Special Equipment Technicians and MADAR Systems Repair Personnel. Generally, respondents to the present survey indicate a more common use of doppler equipment than respondents to the previous survey. This increase in usage of doppler equipment is probably the result of technological advances.

Table 27 indicates the job satisfaction indicators have increased since 1978. Most notably, reenlistment intentions have increased among first-enlistment personnel by 24 percent; this increase is part of a general trend across all specialties reflecting changes in the economy and general attitudes toward reenlistment.

Note that, while job interest has improved, particularly for first- and second-enlistment personnel, the percentages indicating satisfaction with use of training has changed only by a very small amount.

TABLE 26

COMPARISON OF 1978 328X4 SURVEY TO CURRENT STUDY

Job Groups Identified1984 Study (N=1,176)

INS Component Repair Cluster (N=155)

INS Flightline Maintenance Personnel
(N=161)Doppler System Repair Personnel
(N=493)Carousel IV-E Navigation Systems Repair
Cluster (N=74)

B-52G/H Repair Personnel (N=9)

Special Equipment Technician (N=9)

MADAR Systems Repair Cluster (N=166)

Administrative and Supervisory
Cluster (N=105)

Training Personnel (N=38)

1978 Study (N=1,248)

Systems Repairmen (N=745)

Flightline Maintenance
(N=112)Immediate Supervisors
(N=186)Avionic Staff Personnel
(N=17)

Superintendents (N=185)

Training Personnel (N=27)

TABLE 27

COMPARISON OF CURRENT AND PREVIOUS JOB SATISFACTION
(PERCENT MEMBERS PERFORMING)

<u>JOB SATISFACTION</u>	TAFMS GROUPS					
	<u>1-48</u>		<u>49-96</u>		<u>97+</u>	
	<u>1978</u>	<u>1984</u>	<u>1978</u>	<u>1984</u>	<u>1978</u>	<u>1984</u>
FIND JOB INTERESTING	64	76	56	74	73	75
FEEL TALENTS ARE WELL UTILIZED	67	79	68	81	81	84
FEEL TRAINING IS WELL UTILIZED	62	68	66	69	76	81
PLAN TO REENLIST	35	59	50	72	69	74

IMPLICATIONS

Occupational survey results indicate a very diverse career ladder. Although this is a diverse career ladder, there is some commonality among the jobs of the incumbents of this field as a result of the performance of tasks necessary to maintain INS systems or the expansion of job responsibility resulting from additional supervisory and training duties inherent in gaining seniority. Seven major technical job groups, one supervisory group, and one training group were identified.

Specialty documents (AFR 39-1 and STS) were reviewed and were found generally descriptive of the career ladder.

In general, job satisfaction is relatively high in this specialty, with the majority of individuals in all TAFMS groups reporting they found their job interesting and their talents well utilized. Attitudes toward use of training suggest some problem.

The attempts to determine training needs or policy through task difficulty (TD) and training emphasis (TE) ratings were unsuccessful; there does not seem to be good agreement in the field as to what should be trained in initial skill training. This lack of agreement is probably due to the raters rating only tasks related to the systems they were familiar with and rating other tasks low or not all.

In addition, analysis of Specialty Training Standards (STS) revealed that, while there is good general coverage, there are some tasks not referenced to a specific STS paragraph. The lack of training emphasis and the number of tasks not referenced to a specific paragraph implies a need for a review of present training documents with users.

APPENDIX A
REPRESENTATIVE TASKS FOR CAREER LADDER STRUCTURE GROUPS

TABLE A1

REPRESENTATIVE TASKS PERFORMED BY
INERTIAL NAVIGATION SYSTEM (INS) REPAIR PERSONNEL
(GRP043)

TASKS	PERCENT MEMBERS PERFORMING (N=155)
K362 BENCH CHECK INERTIAL PLATFORMS	90
K380 PERFORM GYRO BIAS CALIBRATIONS	90
K349 ALIGN INERTIAL PLATFORMS	88
G212 SECURE OR SAFETY LRU IN AIRCRAFT	87
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	87
K359 BENCH CHECK INERTIAL COMPUTERS	83
K374 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORM SRU	81
K367 BENCH CHECK OUTPUT SIGNAL DISTRIBUTION UNITS	81
J327 REMOVE OR REPLACE INERTIAL PLATFORMS	81
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	80
K373 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTER SRU	78
K348 ALIGN INERTIAL COMPUTERS	77
K378 ISOLATE MALFUNCTIONS TO OUTPUT SIGNAL DISTRIBUTION UNIT SRU	77
K389 REMOVE OR REPLACE INERTIAL PLATFORM SRU	77
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	74
K394 REMOVE OR REPLACE OUTPUT SIGNAL DISTRIBUTION UNIT SRU	74
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	73
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	73
K386 REMOVE OR REPLACE INERTIAL COMPUTER SRU	72
E164 TAG OR LABEL EQUIPMENT	72
Q514 BENCH CHECK WRCS COMPUTERS	72
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IPB)	72
J300 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORMS	70
Q515 BENCH CHECK WRCS SYSTEMS	70
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	70
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	69
0472 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	67
K353 ALIGN OUTPUT SIGNAL DISTRIBUTION UNITS	67
G194 INSPECT SHOCK MOUNTS	66
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	63
C84 INSPECT PARTS RECEIVED FROM SUPPLY OR MANUFACTURERS	63
0469 ALIGN GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	54
0481 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SRU	55
0475 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	57

TABLE A2

REPRESENTATIVE TASKS PERFORMED BY
IN-SHOP INS COMPONENT REPAIR PERSONNEL
(GRP189)

TASKS	PERCENT MEMBERS PERFORMING (N=18)
M450 VERIFY PROGRAM IN DMAS COMPUTERS	100
M436 BENCH CHECK INERTIAL MEASUREMENT UNITS (IMU)	100
M439 ISOLATE MALFUNCTIONS TO DMAS SDC	100
K373 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTER SRU	94
K349 ALIGN INERTIAL PLATFORMS	94
K360 BENCH CHECK INERTIAL MEASUREMENT UNITS (IMU)	94
M438 CALIBRATE IMU	94
K362 BENCH CHECK INERTIAL PLATFORMS	94
M444 REMOVE OR REPLACE DMAS IMU SRU	94
M440 ISOLATE MALFUNCTIONS TO IMU SRU	94
M435 BENCH CHECK DMAS SDC	94
M431 BENCH CHECK DMAS COMPUTERS	94
M432 BENCH CHECK DMAS INERTIAL MEASUREMENT UNIT BUFFERS (IMUB)	94
K359 BENCH CHECK INERTIAL COMPUTERS	89
K374 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORM SRU	89
M445 REMOVE OR REPLACE DMAS IMUB SRU	89
M441 ISOLATE MALFUNCTIONS TO IMUB	89
K363 BENCH CHECK KEYSER CONTROL/CONTROL AND DISPLAY UNITS	89
K380 PERFORM GYRO BIAS CALIBRATIONS	83
M443 REMOVE OR REPLACE DMAS COMPUTER SRU	83
M447 REMOVE OR REPLACE DMAS SDC SRU	83
M449 REPROGRAM IMU	83
M428 ALIGN DMAS COMPUTERS	83
M433 BENCH CHECK DMAS LORAN RECEIVERS	83
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	78
K348 ALIGN INERTIAL COMPUTERS	78
K389 REMOVE OR REPLACE INERTIAL PLATFORM SRU	78
E164 TAG OR LABEL EQUIPMENT	72
K386 REMOVE OR REPLACE INERTIAL COMPUTER SRU	72
K367 BENCH CHECK OUTPUT SIGNAL DISTRIBUTION UNITS	72
E150 MAKE ENTRIES ON MAINTENANCE HISTORICAL RECORDS	67
O475 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	61
K375 ISOLATE MALFUNCTIONS TO INERTIAL REFERENCE UNIT/INERTIAL PLATFORM SRU	61
Q514 BENCH CHECK WRCS COMPUTERS	56

TABLE A3

REPRESENTATIVE TASKS PERFORMED BY
DIGITAL MODULAR GENERAL REPAIR PERSONNEL
(GRP131)

TASKS	PERCENT MEMBERS PERFORMING (N=75)
M432 BENCH CHECK DMAS INERTIAL MEASUREMENT UNIT BUFFERS (IMUB)	99
M438 CALIBRATE IMU	97
M440 ISOLATE MALFUNCTIONS TO IMU SRU	97
M443 REMOVE OR REPLACE DMAS COMPUTER SRU	97
M439 ISOLATE MALFUNCTIONS TO DMAS SDC	97
M436 BENCH CHECK INERTIAL MEASUREMENT UNITS (IMU)	96
M431 BENCH CHECK DMAS COMPUTERS	96
M435 BENCH CHECK DMAS SDC	96
M450 VERIFY PROGRAM IN DMAS COMPUTERS	96
M444 REMOVE OR REPLACE DMAS IMU SRU	96
M441 ISOLATE MALFUNCTIONS TO IMUB	96
M445 REMOVE OR REPLACE DMAS IMUB SRU	96
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	95
L424 REMOVE OR REPLACE IMU	95
L411 OPERATIONALLY CHECK DMAS	93
M447 REMOVE OR REPLACE DMAS SDC SRU	93
K380 PERFORM GYRO BIAS CALIBRATIONS	93
L412 PERFORM DMAS FUNCTIONAL CHECKOUTS	92
G212 SECURE OR SAFETY LRU IN AIRCRAFT	92
L422 REMOVE OR REPLACE DMAS SDC	92
L416 REMOVE OR REPLACE DMAS IMUB	92
G210 REMOVE OR REPLACE MINOR HARDWARE OR LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	92
L414 PERFORM IMU AUTO-CALIBRATIONS	91
L405 ISOLATE MALFUNCTIONS TO DMAS SIGNAL DATA CONVERTERS (SDC)	91
L415 REMOVE OR REPLACE DMAS COMPUTERS	91
L400 ISOLATE MALFUNCTIONS TO DMAS COMPUTERS	91
L406 ISOLATE MALFUNCTIONS TO IMU	89
M428 ALIGN DMAS COMPUTERS	89
K363 BENCH CHECK KEYSER CONTROL/CONTROL AND DISPLAY UNITS	89
K360 BENCH CHECK INERTIAL MEASUREMENT UNITS (IMU)	88
J327 REMOVE OR REPLACE INERTIAL PLATFORMS	88
K362 BENCH CHECK INERTIAL PLATFORMS	88
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	84
K349 ALIGN INERTIAL PLATFORMS	84
K359 BENCH CHECK INERTIAL COMPUTERS	79

TABLE A4
REPRESENTATIVE TASKS PERFORMED BY
ASN-63 NAVIGATION SYSTEM IN-SHOP REPAIR PERSONNEL
(GRP251)

TASKS	PERCENT MEMBERS PERFORMING (N=39)
Q514 BENCH CHECK WRCS COMPUTERS	100
Q515 BENCH CHECK WRCS SYSTEMS	100
Q513 BENCH CHECK WRCS COMPUTER CURSOR CONTROLS	100
Q512 BENCH CHECK WRCS COMPUTER CONTROLS	100
K362 BENCH CHECK INERTIAL PLATFORMS	97
P497 ISOLATE MALFUNCTIONS TO WRCS COMPUTERS	97
P502 OPERATIONALLY CHECK WRCS SYSTEMS	97
P507 REMOVE OR REPLACE WRCS COMPUTERS	97
P496 ISOLATE MALFUNCTIONS TO WRCS COMPUTER CURSOR CONTROLS	97
K349 ALIGN INERTIAL PLATFORMS	95
Q520 ISOLATE MALFUNCTIONS TO WRCS COMPUTER SUR OR MODULES	95
K373 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTER SRU	92
K374 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORM SRU	92
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	92
O472 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	92
Q510 ALIGN WRCS COMPUTERS	92
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	92
K359 BENCH CHECK INERTIAL COMPUTERS	90
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	90
K367 BENCH CHECK OUTPUT SIGNAL DISTRIBUTION UNITS	90
Q524 REMOVE OR REPLACE WRCS COMPUTER MODULE OR COMPONENTS	90
K378 ISOLATE MALFUNCTIONS TO OUTPUT SIGNAL DISTRIBUTION UNIT SRU	90
Q525 REMOVE OR REPLACE WRCS COMPUTER SRU OR MODULES	90
P498 ISOLATE MALFUNCTIONS TO WRCS OR ASSOCIATED SYSTEMS	90
K394 REMOVE OR REPLACE OUTPUT SIGNAL DISTRIBUTION UNIT SRU	90
K348 ALIGN INERTIAL COMPUTERS	87
K380 PERFORM GYRO BIAS CALIBRATIONS	87
E150 MAKE ENTRIES ON MAINTENANCE HISTORICAL RECORDS	87
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	87
O486 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS SRU	87
K389 REMOVE OR REPLACE INERTIAL PLATFORM SRU	87
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	85
K353 ALIGN OUTPUT SIGNAL DISTRIBUTION UNITS	79
K386 REMOVE OR REPLACE INERTIAL COMPUTER SRU	74

TABLE A5

REPRESENTATIVE TASKS PERFORMED BY
ASN-56 NAVIGATIONAL SYSTEM FLIGHTLINE REPAIR PERSONNEL
(GRP165)

TASKS	PERCENT MEMBERS PERFORMING (N=5)
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	100
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	100
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	100
J300 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORMS	100
G212 SECURE OR SAFETY LRU IN AIRCRAFT	100
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	100
J327 REMOVE OR REPLACE INERTIAL PLATFORMS	100
K374 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORM SRU	100
O475 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	100
K389 REMOVE OR REPLACE INERTIAL PLATFORM SRU	100
K380 PERFORM GYRO BIAS CALIBRATIONS	100
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	80
K359 BENCH CHECK INERTIAL COMPUTERS	80
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	80
E164 TAG OR LABEL EQUIPMENT	80
F173 INSPECT EGRESS SYSTEM SAFETY PIN INSTALLATION	80
N464 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	80
G191 CLEAN INERTIAL NAVIGATION SYSTEM/DOPPLER NAVIGATION SYSTEM FILTERS	80
K348 ALIGN INERTIAL COMPUTERS	80
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	80
J315 PERFORM GYRO BIAS	80
N457 OPERATIONALLY CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SYSTEMS	80
O481 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SRU	80
K362 BENCH CHECK INERTIAL PLATFORMS	80
E144 MAINTAIN PRECISION MEASURING EQUIPMENT LABORATORY (PMEL) TEST EQUIPMENT SCHEDULES	60
E150 MAKE ENTRIES ON MAINTENANCE HISTORICAL RECORDS	60
G194 INSPECT SHOCK MOUNTS	60
E141 MAINTAIN AFTO FORMS 244 OR 245 (SYSTEM/EQUIPMENT STATUS RECORDS)	40

TABLE A6

REPRESENTATIVE TASKS PERFORMED BY
ASN-56 NAVIGATIONAL SYSTEMS IN-SHOP REPAIR PERSONNEL
(GRP072)

TASKS	PERCENT MEMBERS PERFORMING (N=14)
0481 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SRU	100
0475 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	93
K349 ALIGN INERTIAL PLATFORMS	93
K359 BENCH CHECK INERTIAL COMPUTERS	86
K373 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTER SRU	86
0469 ALIGN GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	86
K362 BENCH CHECK INERTIAL PLATFORMS	86
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	86
0489 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SRU	86
K380 PERFORM GYRO BIAS CALIBRATIONS	86
K367 BENCH CHECK OUTPUT SIGNAL DISTRIBUTION UNITS	86
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	79
K348 ALIGN INERTIAL COMPUTERS	71
K374 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORM SRU	71
G194 INSPECT SHOCK MOUNTS	71
K357 BENCH CHECK HEADING COMPUTERS	71
C84 INSPECT PARTS RECEIVED FROM SUPPLY OR MANUFACTURERS	71
K386 REMOVE OR REPLACE INERTIAL COMPUTER SRU	64
E164 TAG OR LABEL EQUIPMENT	64
0472 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	64
K368 BENCH CHECK RECONNAISSANCE ADAPTER UNITS	64
K378 ISOLATE MALFUNCTIONS TO OUTPUT SIGNAL DISTRIBUTION UNIT SRU	64
0482 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SRU COMPONENTS	64
K353 ALIGN OUTPUT SIGNAL DISTRIBUTION UNITS	64
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	64
A13 ESTABLISH WORK PRIORITIES	57
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	50
0466 ALIGN GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	50

TABLE A7
REPRESENTATIVE TASKS PERFORMED BY
INS FLIGHTLINE MAINTENANCE PERSONNEL
(GRP039)

TASKS	PERCENT MEMBERS PERFORMING (N=161)
G212 SECURE OR SAFETY LRU IN AIRCRAFT	91
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	83
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	83
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	82
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	80
F178 LAUNCH OR RECOVER AIRCRAFT	77
F181 OPERATE POWER AGE	76
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	76
G206 REMOVE OR INSTALL ACCESS PANELS	71
F182 PERFORM FIRE GUARD DUTIES	69
G215 TAPE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	68
F188 TOW AIRCRAFT	67
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	64
G208 REMOVE OR REPLACE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM CONNECTORS	64
F179 OPERATE NON-POWERED AEROSPACE GROUND EQUIPMENT (AGE)	63
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	61
J327 REMOVE OR REPLACE INERTIAL PLATFORMS	60
J300 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORMS	60
F173 INSPECT EGRESS SYSTEM SAFETY PIN INSTALLATION	60
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	58
F185 REFUEL OR DEFUEL AIRCRAFT	57
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	56
F171 ASSIST IN REMOVING OR REPLACING AIRCRAFT MECHANICAL SYSTEMS	52
E164 TAG OR LABEL EQUIPMENT	50
N457 OPERATIONALLY CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SYSTEMS	47
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	44
P502 OPERATIONALLY CHECK WRCS SYSTEMS	43
J329 REMOVE OR REPLACE INU	32
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	30

TABLE A8
REPRESENTATIVE TASKS PERFORMED BY
DIGITAL MODULATOR AVIONIC SYSTEM FLIGHTLINE REPAIR PERSONNEL
(GRP263)

TASKS	PERCENT MEMBERS PERFORMING (N=30)
L411 OPERATIONALLY CHECK DMAS	100
L412 PERFORM DMAS FUNCTIONAL CHECKOUTS	100
L424 REMOVE OR REPLACE IMU	100
L406 ISOLATE MALFUNCTIONS TO IMU	100
L422 REMOVE OR REPLACE DMAS SDC	100
L400 ISOLATE MALFUNCTIONS TO DMAS COMPUTERS	100
L414 PERFORM IMU AUTO-CALIBRATIONS	100
L416 REMOVE OR REPLACE DMAS IMUB	100
L409 ISOLATE MALFUNCTIONS TO INERTIAL MEASUREMENT UNIT BUFFERS (IMUB)	100
L399 ISOLATE MALFUNCTIONS TO DIGITAL MODULAR AVIONIC SYSTEM (DMAS) RELAY ASSEMBLIES	100
L426 REMOVE OR REPLACE IMU FILTER REGULATORS	100
L415 REMOVE OR REPLACE DMAS COMPUTERS	97
L405 ISOLATE MALFUNCTIONS TO DMAS SIGNAL DATA CONVERTERS (SDC)	97
G212 SECURE OR SAFETY LRU IN AIRCRAFT	97
L417 REMOVE OR REPLACE DMAS LORAN ANTENNA COUPLERS	97
L404 ISOLATE MALFUNCTIONS TO DMAS POWER SUPPLIES	97
L420 REMOVE OR REPLACE DMAS POWER SUPPLIES	97
L410 ISOLATE MALFUNCTIONS TO TARGET INSERTION CONTROL (TIC) PANELS	97
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	93
L403 ISOLATE MALFUNCTIONS TO DMAS LORAN RECEIVERS	93
L421 REMOVE OR REPLACE DMAS RELAY ASSEMBLIES	93
L419 REMOVE OR REPLACE DMAS LORAN RECEIVERS	93
L401 ISOLATE MALFUNCTIONS TO DMAS LONG-RANGE NAVIGATION (LORAN) ANTENNA COUPLERS	90
G215 TAPE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	90
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	90
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	83
F181 OPERATE POWER AGE	80
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	80
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	80
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	67
L413 PERFORM DMAS WEAPONS DELIVERY CHECKOUTS	63

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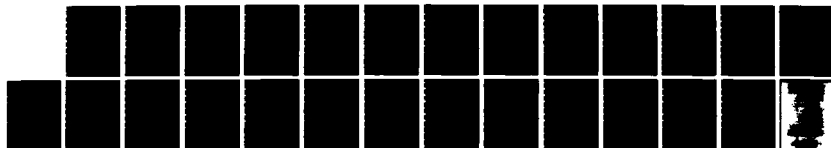
AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS CAREER
LADDER AFSC 328X4(U) AIR FORCE OCCUPATIONAL MEASUREMENT
CENTER RANDOLPH AFB TX JUN 84 AFPT-90-328-500

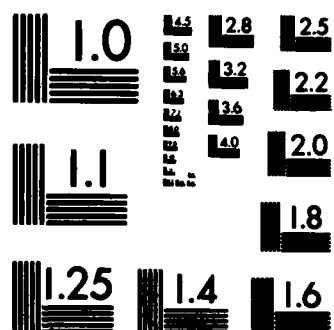
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TABLE A9
REPRESENTATIVE TASKS PERFORMED BY
ASN-46 NAVIGATIONAL COMPUTER REPAIR PERSONNEL
(GRP200)

TASKS	PERCENT MEMBERS PERFORMING (N=12)
G212 SECURE OR SAFETY LRU IN AIRCRAFT	100
F178 LAUNCH OR RECOVER AIRCRAFT	100
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	100
F182 PERFORM FIRE GUARD DUTIES	100
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	100
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	92
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	92
F181 OPERATE POWER AGE	92
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	92
G215 TAPE AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	92
J327 REMOVE OR REPLACE INERTIAL PLATFORMS	83
N452 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	83
N453 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	83
F188 TOW AIRCRAFT	83
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	83
N457 OPERATIONALLY CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SYSTEMS	75
J300 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORMS	75
N451 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER CONTROL INDICATORS	75
N460 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTER CONTROL INDICATORS	75
N464 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTERS	67
F171 ASSIST IN REMOVING OR REPLACING AIRCRAFT MECHANICAL SYSTEMS	67
J308 ISOLATE MALFUNCTIONS TO OUTPUT SIGNAL DISTRIBUTION UNITS	67
J321 REMOVE OR REPLACE HEADING COMPUTERS	67
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	58
N461 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	58
G206 REMOVE OR INSTALL ACCESS PANELS	58
E164 TAG OR LABEL EQUIPMENT	58

TABLE A10

REPRESENTATIVE TASKS PERFORMED BY
ASN-63 INS FLIGHTLINE REPAIR PERSONNEL
(GRP161)

TASKS	PERCENT MEMBERS PERFORMING (N=68)
G212 SECURE OR SAFETY LRU IN AIRCRAFT	94
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	93
J327 REMOVE OR REPLACE INERTIAL PLATFORMS	91
P502 OPERATIONALLY CHECK WRCS SYSTEMS	90
P507 REMOVE OR REPLACE WRCS COMPUTERS	90
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	90
P505 REMOVE OR REPLACE WRCS COMPUTER CONTROLS	90
P506 REMOVE OR REPLACE WRCS COMPUTER CURSOR CONTROLS	90
P495 ISOLATE MALFUNCTIONS TO WRCS COMPUTER CONTROLS	88
P496 ISOLATE MALFUNCTIONS TO WRCS COMPUTER CURSOR CONTROLS	88
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	87
J300 ISOLATE MALFUNCTIONS TO INERTIAL PLATFORMS	87
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	87
P497 ISOLATE MALFUNCTIONS TO WRCS COMPUTERS	85
P498 ISOLATE MALFUNCTIONS TO WRCS OR ASSOCIATED SYSTEMS	85
P494 ISOLATE MALFUNCTIONS TO WEAPONS DELIVERY PANELS	85
P504 REMOVE OR REPLACE WEAPONS DELIVERY PANELS	85
F181 OPERATE POWER AGE	84
J315 PERFORM GYRO BIAS	84
P501 OPERATE WEAPONS CONTROL SYSTEM (WCS) OR ASSOCIATED SYSTEMS	82
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	82
J308 ISOLATE MALFUNCTIONS TO OUTPUT SIGNAL DISTRIBUTION UNITS	82
N461 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	76
N453 ISOLATE MALFUNCTIONS TO GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	76
J338 REMOVE OR REPLACE OUTPUT SIGNAL DISTRIBUTION UNITS	76
G206 REMOVE OR INSTALL ACCESS PANELS	75
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	72
N457 OPERATIONALLY CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER SYSTEMS	71
F173 INSPECT EGRESS SYSTEM SAFETY PIN INSTALLATION	71
P503 PERFORM STATIC BOMB RELEASES OTHER THAN DMAS	63

TABLE A11

REPRESENTATIVE TASKS PERFORMED BY
AIRCRAFT SUPPORT PERSONNEL
(GRP050)

TASKS	PERCENT MEMBERS PERFORMING (N=42)
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	88
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	83
G212 SECURE OR SAFETY LRU IN AIRCRAFT	81
F178 LAUNCH OR RECOVER AIRCRAFT	79
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	79
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	76
J329 REMOVE OR REPLACE INU	76
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	71
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	71
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	71
F188 TOW AIRCRAFT	69
F179 OPERATE NON-POWERED AEROSPACE GROUND EQUIPMENT (AGE)	69
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	69
G206 REMOVE OR INSTALL ACCESS PANELS	67
F185 REFUEL OR DEFUEL AIRCRAFT	64
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	62
F181 OPERATE POWER AGE	60
F187 SERVICE AIRCRAFT WITH HYDRAULIC FLUID, AIR, OR OIL	52
J303 ISOLATE MALFUNCTIONS TO MASTER BUSS CONTROLLERS	52
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	48
F182 PERFORM FIRE GUARD DUTIES	48
E164 TAG OR LABEL EQUIPMENT	45
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	43
F171 ASSIST IN REMOVING OR REPLACING AIRCRAFT MECHANICAL SYSTEMS	43
F189 WASH AIRCRAFT	43
F173 INSPECT EGRESS SYSTEM SAFETY PIN INSTALLATION	40
J314 OPERATIONALLY CHECK INERTIAL SYSTEMS INTERFACE WITH ASSOCIATE EQUIPMENT OTHER THAN DMAS	38
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	36
F180 OPERATE OR SERVICE MAINTENANCE DISPATCH VEHICLES	31
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	29

TABLE A12

REPRESENTATIVE TASKS PERFORMED BY
DOPPLER SYSTEMS REPAIR PERSONNEL
(GRP044)

TASKS	PERCENT MEMBERS PERFORMING (N=493)
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	94
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	89
G212 SECURE OR SAFETY LRU IN AIRCRAFT	88
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	86
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	86
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	86
G197 ISOLATE MALFUNCTIONS TO RELAYS	85
G211 REMOVE OR REPLACE RELAYS	84
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITH LINE REPLACEABLE UNITS (LRU)	83
G213 SOLDER AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	83
H232 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTERS	82
H229 OPERATIONALLY CHECK DOPPLER NAVIGATIONAL COMPUTER SYSTEMS	81
H220 ISOLATE MALFUNCTIONS TO DOPPLER NAVIGATIONAL COMPUTERS	81
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	77
G206 REMOVE OR INSTALL ACCESS PANELS	77
H233 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTER CONTROL BOXES	77
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	76
J329 REMOVE OR REPLACE INU	76
H234 REMOVE OR REPLACE DOPPLER SENSOR ANTENNAS	76
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	75
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IPB)	75
H219 ISOLATE MALFUNCTIONS TO DOPPLER NAVIGATION COMPUTER CONTROL BOXES	75
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	74
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	74
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	74
J289 ISOLATE MALFUNCTIONS TO BATTERY UNITS (BU)	72
H225 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR RECEIVER- TRANSMITTERS (RT)	71
H230 OPERATIONALLY CHECK DOPPLER SENSOR SYSTEMS	70
C81 INSPECT CONSOLIDATED TOOLS KITS (CTK)	70
J290 ISOLATE MALFUNCTIONS TO CAROUSEL IV-E RELAYS, ANNUNCI- ATORS, OR SWITCHES	66
F178 LAUNCH OR RECOVER AIRCRAFT	55

TABLE A13

REPRESENTATIVE TASKS PERFORMED BY
APN-218 DOPPLER NAVIGATION SYSTEM REPAIR PERSONNEL
(GRP120)

TASKS	PERCENT MEMBERS PERFORMING (N=86)
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	93
G212 SECURE OR SAFETY LRU IN AIRCRAFT	93
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	93
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	93
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	92
H232 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTERS	92
G206 REMOVE OR INSTALL ACCESS PANELS	91
G197 ISOLATE MALFUNCTIONS TO RELAYS	91
H229 OPERATIONALLY CHECK DOPPLER NAVIGATIONAL COMPUTER SYSTEMS	90
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	90
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	90
J329 REMOVE OR REPLACE INU	90
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	88
H220 ISOLATE MALFUNCTIONS TO DOPPLER NAVIGATIONAL COMPUTERS	88
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	87
J289 ISOLATE MALFUNCTIONS TO BATTERY UNITS (BU)	87
G211 REMOVE OR REPLACE RELAYS	87
J290 ISOLATE MALFUNCTIONS TO CAROUSEL IV-E RELAYS, ANNUNCI- ATORS, OR SWITCHES	83
G213 SOLDER AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	83
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (PB)	81
J296 ISOLATE MALFUNCTIONS TO INERTIAL JUNCTION BOXES	81
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	80
H233 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTER CONTROL BOXES	79
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	78
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	73
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	73
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	73
J344 VERIFY PROGRAM IN INS DIGITAL COMPUTERS	73
I256 BENCH CHECK DOPPLER NAVIGATIONAL COMPUTERS	71
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	70
H230 OPERATIONALLY CHECK DOPPLER SENSOR SYSTEMS	65

TABLE A14

REPRESENTATIVE TASKS PERFORMED BY
GENERAL DOPPLER SYSTEMS MAINTENANCE PERSONNEL
(GRP268)

TASKS	PERCENT MEMBERS PERFORMING (N=179)
H225 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR RECEIVER- TRANSMITTERS (RT)	99
H236 REMOVE OR REPLACE DOPPLER SENSOR FREQUENCY TRACKERS	99
H220 ISOLATE MALFUNCTIONS TO DOPPLER NAVIGATIONAL COMPUTERS	99
H232 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTERS	99
H239 REMOVE OR REPLACE DOPPLER SENSOR RECEIVER-TRANSMITTER (RT)	99
H219 ISOLATE MALFUNCTIONS TO DOPPLER NAVIGATION COMPUTER CONTROL BOXES	99
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	99
I259 BENCH CHECK DOPPLER SENSOR FREQUENCY TRACKERS	98
H222 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR FREQUENCY TRACKERS	98
I261 BENCH CHECK DOPPLER SENSOR RT	98
I268 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR RT SRU	98
H221 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR ANTENNAS	98
H233 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTER CONTROL BOXES	98
I257 BENCH CHECK DOPPLER SENSOR ANTENNAS	98
I266 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR FREQUENCY TRACKER SRU	97
H229 OPERATIONALLY CHECK DOPPLER NAVIGATIONAL COMPUTER SYSTEMS	97
I256 BENCH CHECK DOPPLER NAVIGATIONAL COMPUTERS	97
I247 ADJUST DOPPLER SENSOR RECEIVER-TRANSMITTER (RT) COMPONENTS	97
I278 REMOVE OR REPLACE DOPPLER SENSOR RT SRU	97
H218 ISOLATE MALFUNCTIONS TO DOPPLER CONTROL BOXES	97
I276 REMOVE OR REPLACE DOPPLER SENSOR FREQUENCY TRACKER SRU	96
H234 REMOVE OR REPLACE DOPPLER SENSOR ANTENNAS	96
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	95
I246 ADJUST DOPPLER SENSOR FREQUENCY TRACKER SHOP REPLACEABLE UNITS (SRU)	94
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	92
G212 SECURE OR SAFETY LRU IN AIRCRAFT	92
I252 ALIGN DOPPLER SENSOR FREQUENCY TRACKERS	91
I254 ALIGN DOPPLER SENSOR RT	91
I249 ALIGN DOPPLER NAVIGATIONAL COMPUTERS	91
I284 REPAIR DOPPLER SENSOR FREQUENCY TRACKER SRU	89
H230 OPERATIONALLY CHECK DOPPLER SENSOR SYSTEMS	88
H217 ISOLATE MALFUNCTIONS BETWEEN DOPPLER NAVIGATION COMPUTER SETS OR DOPPLER SENSORS	85

TABLE A15

REPRESENTATIVE TASKS PERFORMED BY
DOPPLER SYSTEM SHIFT LEADERS AND NCOICs
(GRP215)

TASKS	PERCENT MEMBERS PERFORMING (N=78)
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	99
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IPB)	97
H229 OPERATIONALLY CHECK DOPPLER NAVIGATIONAL COMPUTER SYSTEMS	97
H230 OPERATIONALLY CHECK DOPPLER SENSOR SYSTEMS	97
H232 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTERS	97
H217 ISOLATE MALFUNCTIONS BETWEEN DOPPLER NAVIGATION COMPUTER SETS OR DOPPLER SENSORS	97
C81 INSPECT CONSOLIDATED TOOL KITS (CTK)	96
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	96
G197 ISOLATE MALFUNCTIONS TO RELAYS	96
H225 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR RECEIVER- TRANSMITTERS (RT)	95
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	95
E137 MAINTAIN AF FORMS 2430 (SPECIALIST DISPATCH CONTROL LOG)	94
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	94
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	92
G212 SECURE OR SAFETY LRU ON AIRCRAFT	92
H222 ISOLATE MALFUNCTIONS TO DOPPLER SENSOR FREQUENCY TRACKERS	92
J329 REMOVE OR REPLACE INU	92
C84 INSPECT PARTS RECEIVED FROM SUPPLY OR MANUFACTURERS	91
D107 DEMONSTRATE OPERATION OF EQUIPMENT	90
D102 CONDUCT OJT	88
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	88
G201 PERFORM ON-EQUIPMENT QUALITY VERIFICATIONS	88
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	88
H239 REMOVE OR REPLACE DOPPLER SENSOR RECEIVER-TRANSMITTER (RT)	88
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	86
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	85
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEM SPECIALISTS (AFSC 32834)	85
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	85
B34 DIRECT SHOP MAINTENANCE ACTIVITIES	83
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	81
D116 INSTRUCT PERSONNEL ON EQUIPMENT MAINTENANCE OR REPAIR TECHNIQUES	79
B55 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	73

TABLE A16

REPRESENTATIVE TASKS PERFORMED BY
ASTRO INERTIAL NAVIGATION SYSTEMS
(GRP166)

TASKS	PERCENT MEMBERS PERFORMING (N=26)
J316 PERFORM SR-71 OR U2/TR1 MISSION CONFIGURATIONS	100
J318 REMOVE OR REPLACE CHRONOMETERS	100
K354 BENCH CHECK ASTRO INERTIAL UNITS	100
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	100
K355 BENCH CHECK CHRONOMETERS	96
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	96
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	96
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	96
J329 REMOVE OR REPLACE INU	96
W670 INSPECT SYSTEM TEMPERATURE AND VOLTAGE MONITOR (NSA-14V2)	96
J291 ISOLATE MALFUNCTIONS TO CHRONOMETERS	96
H232 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTERS	96
J287 ALIGN ASTRO INERTIAL UNITS	92
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	92
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	92
J315 PERFORM GYRO BIAS	92
W653 INSPECT COMPUTER MAINTENANCE PANELS (NSA-14V2)	92
W669 INSPECT SYSTEM INTERFACE TEST SETS (NSA-14V2)	92
W662 INSPECT PORTABLE COOLING UNITS (NSA-14V2)	92
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	92
G212 SECURE OR SAFETY LRU IN AIRCRAFT	92
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	92
W663 INSPECT PRINTER TEST SETS (NSA-14V2)	92
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	88
G206 REMOVE OR INSTALL ACCESS PANELS	88
K380 PERFORM GYRO BIAS CALIBRATIONS	85
W654 INSPECT CONTROL AND DISPLAY TEST SETS (NSA-14V2)	85
W674 INSPECT TIME STANDARDS	85
E150 MAKE ENTRIES ON MAINTENANCE HISTORICAL RECORDS	81
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	77
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	77
F173 INSPECT EGRESS SYSTEM SAFETY PIN INSTALLATION	73

TABLE A17

REPRESENTATIVE TASKS PERFORMED BY
CAROUSEL IV-E NAVIGATION REPAIR CLUSTER
(GRP067)

TASKS	PERCENT MEMBERS PERFORMING (N=74)
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	96
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	95
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	95
J329 REMOVE OR REPLACE INU	95
J289 ISOLATE MALFUNCTIONS TO BATTERY UNITS (BU)	95
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	93
J333 REMOVE OR REPLACE MODE SELECT UNITS (MSU)	91
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	89
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	89
J304 ISOLATE MALFUNCTIONS TO MODE SELECT UNITS (MSU)	89
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	86
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	86
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	84
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	82
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	76
G212 SECURE OR SAFETY LRU ON AIRCRAFT	76
J290 ISOLATE MALFUNCTIONS TO CAROUSEL IV-E RELAYS, ANNUNCI- ATORS, OR SWITCHES	76
G197 ISOLATE MALFUNCTIONS TO RELAYS	76
J306 ISOLATE MALFUNCTIONS TO NAVIGATION UNITS (NU)	74
J336 REMOVE OR REPLACE NAVIGATION UNITS (NU)	72
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	73
G211 REMOVE OR REPLACE RELAYS	73
J305 ISOLATE MALFUNCTIONS TO NAVIGATION COURSE SELECT PANELS OR NAVIGATION SELECTOR PANELS (NSP)	69
J302 ISOLATE MALFUNCTIONS TO LEDEX RELAYS	68
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	68
F181 OPERATE POWER AGE	66
D107 DEMONSTRATE OPERATION OF EQUIPMENT	65
J334 REMOVE OR REPLACE NAVIGATION COURSE SELECT PANELS OR NAVIGATION SELECTOR PANELS (NSP)	64
J331 REMOVE OR REPLACE LEDEX RELAYS	64
C81 INSPECT CONSOLIDATED TOOL KITS (CTK)	62

TABLE A18

REPRESENTATIVE TASKS PERFORMED BY
C-5 AND C-141 NON-DOPPLER CAROUSEL IV-E REPAIR PERSONNEL
(GRP082)

TASKS	PERCENT MEMBERS PERFORMING (N=51)
J290 ISOLATE MALFUNCTIONS TO CAROUSEL IV-E RELAYS, ANNUNCIATORS, OR SWITCHES	96
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	94
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	94
J302 ISOLATE MALFUNCTIONS TO LEDEX RELAYS	94
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	94
J329 REMOVE OR REPLACE INU	94
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	92
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	92
J289 ISOLATE MALFUNCTIONS TO BATTERY UNITS (BU)	92
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	90
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	90
J305 ISOLATE MALFUNCTIONS TO NAVIGATION COURSE SELECT PANELS OR NAVIGATION SELECTOR PANELS (NSP)	88
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	88
J331 REMOVE OR REPLACE LEDEX RELAYS	88
G197 ISOLATE MALFUNCTIONS TO RELAYS	88
G211 REMOVE OR REPLACE RELAYS	88
G198 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS ON AIRCRAFT	88
J319 REMOVE OR REPLACE COMPASS AMPLIFIER	88
G195 ISOLATE MALFUNCTIONS TO ASSOCIATED AIRCRAFT EQUIPMENT	86
J334 REMOVE OR REPLACE NAVIGATION COURSE SELECT PANELS OR NAVIGATION SELECTOR PANELS (NSP)	84
K366 BENCH CHECK NAVIGATIONAL SELECT PANELS	84
J292 ISOLATE MALFUNCTIONS TO COMPASS AMPLIFIERS	82
J339 REMOVE OR REPLACE PILOTS INDICATOR CONTROL UNITS (PICU)	82
J306 ISOLATE MALFUNCTIONS TO NAVIGATION UNITS (NU)	80
G199 ISOLATE MALFUNCTIONS TO WIRING PROBLEMS WITHIN LINE REPLACEABLE UNITS (LRU)	80
K365 BENCH CHECK NAVIGATION UNITS (NU)	75
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	75
G191 CLEAN INERTIAL NAVIGATION SYSTEM/DOPPLER NAVIGATION SYSTEM FILTERS	75
J336 REMOVE OR REPLACE NAVIGATION UNITS (NU)	73
K393 REMOVE OR REPLACE NAVIGATIONAL SELECT PANELS UPPER SWITCH ASSEMBLIES	71

TABLE A19

REPRESENTATIVE TASKS PERFORMED BY
AWACS NAVIGATION SYSTEM REPAIR PERSONNEL
(GPR101)

TASKS	PERCENT MEMBERS PERFORMING (N=23)
J313	100
J317	100
J298	100
J289	100
R529	96
R536	96
G190	96
J329	96
R531	96
R537	96
J293	96
J333	96
J304	96
F172	91
R532	91
J320	91
R530	91
R527	91
R534	91
R538	91
G195	87
G200	87
G202	87
G206	87
G212	87
F178	78
J336	70
E136	70
F181	65
J306	61
D107	61
D102	57
E150	52

TABLE A20

REPRESENTATIVE TASKS PERFORMED BY
B-52D/G REPAIR PERSONNEL
(GRP052)

TASKS	PERCENT MEMBERS PERFORMING (N=9)
J329 REMOVE OR REPLACE INU	100
H232 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTERS	100
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	100
G202 PERFORM PREVENTIVE MAINTENANCE ON INERTIAL AND DOPPLER NAVIGATIONAL SYSTEMS	89
G210 REMOVE OR REPLACE MINOR HARDWARE ON LRU, TEST SETS, OR MOCKUPS, SUCH AS KNOBS OR LAMPS	89
G212 SECURE OR SAFETY LRU IN AIRCRAFT	89
G206 REMOVE OR INSTALL ACCESS PANELS	89
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	89
J333 REMOVE OR REPLACE MODE SELECT UNITS (MSU)	78
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	78
J289 ISOLATE MALFUNCTIONS TO BATTERY UNITS (BU)	78
G213 SOLDER AVIONIC INERTIAL OR RADAR NAVIGATION SYSTEM WIRING	78
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	67
I256 BENCH CHECK DOPPLER NAVIGATIONAL COMPUTERS	67
J343 REPROGRAM INS DIGITAL COMPUTERS	67
H229 OPERATIONALLY CHECK DOPPLER NAVIGATIONAL COMPUTER SYSTEMS	56
H236 REMOVE OR REPLACE DOPPLER SENSOR FREQUENCY TRACKERS	56
F181 OPERATE POWER AGE	56
J344 VERIFY PROGRAM IN INS DIGITAL COMPUTERS	56
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	56
G194 INSPECT SHOCK MOUNTS	56
E160 RESEARCH OR IDENTIFY PARTS USING ILLUSTRATED PARTS BREAKDOWNS (IPB)	56
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	56
H239 REMOVE OR REPLACE DOPPLER SENSOR RECEIVER-TRANSMITTER (RT)	56
I247 ADJUST DOPPLER SENSOR RECEIVER-TRANSMITTER (RT) COMPONENTS	56
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	56
H220 ISOLATE MALFUNCTIONS TO DOPPLER NAVIGATIONAL COMPUTERS	56
J296 ISOLATE MALFUNCTIONS TO INERTIAL JUNCTION BOXES	56
J326 REMOVE OR REPLACE INERTIAL JUNCTION BOXES	56
E164 TAG OR LABEL EQUIPMENT	44
H233 REMOVE OR REPLACE DOPPLER NAVIGATIONAL COMPUTER CONTROL BOXES	44
H219 ISOLATE MALFUNCTIONS TO DOPPLER NAVIGATION COMPUTER CONTROL BOXES	44

TABLE A21

REPRESENTATIVE TASKS PERFORMED BY
SPECIAL EQUIPMENT TECHNICIANS
(GRP094)

TASKS	PERCENT MEMBERS PERFORMING (N=7)
W626 CALIBRATE MICROWAVE TEST FIXTURES	100
W706 ISOLATE MALFUNCTIONS TO PLATFORM CONTINUITY CHECKERS	100
G212 SECURE OR SAFETY LRU IN AIRCRAFT	100
F181 OPERATE POWER AGE	100
L424 REMOVE OR REPLACE IMU	100
L425 REMOVE OR REPLACE IMU FILTER REGULATOR RELAY ASSEMBLIES	100
L399 ISOLATE MALFUNCTIONS TO DIGITAL MODULAR AVIONIC SYSTEM (DMAS) RELAY ASSEMBLIES	100
L423 REMOVE OR REPLACE DTMR	100
J329 REMOVE OR REPLACE INU	100
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	100
J323 REMOVE OR REPLACE INERTIAL COMPUTERS	86
J298 ISOLATE MALFUNCTIONS TO INERTIAL NAVIGATION UNITS (INU)	86
N461 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTER AMPLIFIERS	86
N462 REMOVE OR REPLACE GENERAL PURPOSE OR NAVIGATIONAL COMPUTER POWER SUPPLIES	86
O473 BENCH CHECK GENERAL PURPOSE OR NAVIGATIONAL COMPUTER POWER SUPPLIES	86
J294 ISOLATE MALFUNCTIONS TO INERTIAL COMPUTERS	86
J306 ISOLATE MALFUNCTIONS TO NAVIGATION UNITS (NU)	86
J327 REMOVE OR RELACE INERTIAL PLATFORMS	86
N459 PERFORM MARRIAGE ADJUSTMENTS OF INSTALLED LRU	86
K365 BENCH CHECK NAVIGATION UNITS (NU)	86
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	86
K363 BENCH CHECK KEYSER CONTROL/CONTROL AND DISPLAY UNITS	86
J309 ISOLATE MALFUNCTIONS TO PILOT INDICATOR CONTROL UNITS (PICU)	86
K386 REMOVE OR REPLACE INERTIAL COMPUTER SRU	86
J338 REMOVE OR REPLACE OUTPUT SIGNAL DISTRIBUTION UNITS	86
J320 REMOVE OR REPLACE CONTROL AND DISPLAY UNITS (CDU)	86
E164 TAG OR LABEL EQUIPMENT	86
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	86
B43 IMPLEMENT PRECISION MEASURING EQUIPMENT (PME) MONITORING PROGRAMS	86
E144 MAINTAIN PRECISION MEASURING EQUIPMENT LABORATORY (PMEL) TEST EQUIPMENT SCHEDULES	86
K380 PERFORM GYRO BIAS CALIBRATIONS	86
W629 CALIBRATE SYSTEMS PERFORMANCE TEST SETS (SPTS)	71

TABLE A22

REPRESENTATIVE TASKS PERFORMED BY
MADAR SYSTEMS REPAIR PERSONNEL
(GRP054)

TASKS	PERCENT MEMBERS PERFORMING (N=166)
T567 REMOVE OR REPLACE MADAR SAR	96
T561 REMOVE OR REPLACE MADAR DRU	96
T564 REMOVE OR REPLACE MADAR ODRU	96
T559 REMOVE OR REPLACE MADAR COMPUTERS	96
T553 ISOLATE MALFUNCTIONS TO MADAR SIGNAL ACQUISITION REMOTES (SAR)	95
T548 ISOLATE MALFUNCTIONS TO MADAR DATA RETRIEVAL UNITS (DRU)	95
T551 ISOLATE MALFUNCTIONS TO MADAR OSCILLOSCOPE AND DIGITAL READOUT UNITS (ODRU)	95
T568 REMOVE OR REPLACE MADAR SCA UNITS, SUCH AS TEMPERATURE, PRESSURE, OR VIBRATION	95
T560 REMOVE OR REPLACE MADAR SCU	95
T552 ISOLATE MALFUNCTIONS TO MADAR PRINTOUT UNITS (POU)	95
T563 REMOVE OR REPLACE MADAR MMUX	95
T562 REMOVE OR REPLACE MADAR MDR	95
T566 REMOVE OR REPLACE MADAR RECORDING TAPES	94
T546 ISOLATE MALFUNCTIONS TO MADAR COMPUTERS	94
T570 REPROGRAM MADAR COMPUTERS	94
T550 ISOLATE MALFUNCTIONS TO MADAR MANUAL MULTIPLEXER ADAPTER (MMUX)	94
T565 REMOVE OR REPLACE MADAR POU	94
T549 ISOLATE MALFUNCTIONS TO MADAR MAINTENANCE DATA RECORDERS (MDR)	94
T547 ISOLATE MALFUNCTIONS TO MADAR CONTROL AND SEQUENCE UNITS (CSU)	93
T556 ISOLATE MALFUNCTIONS TO MADAR SYSTEM CENTRAL MULTIPLEXER ADAPTER (CMA)	93
T558 REMOVE OR REPLACE MADAR CMA	93
T554 ISOLATE MALFUNCTIONS TO MADAR SIGNAL-CONDITIONER AMPLIFIERS (SCA) SENSING UNITS (TEMPERATURE, PRESSURE, OR VIBRATION)	92
T569 REMOVE OR REPLACE MADAR SCM	91
T557 OPERATE MADAR FOR SYSTEM INTERFACE CHECK-OUTS	90
T555 ISOLATE MALFUNCTIONS TO MADAR SIGNAL-CONDITIONING MULTIPLEXERS (SCM)	89
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	89
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	85
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	83
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	81

TABLE A23

REPRESENTATIVE TASKS PERFORMED BY
GENERAL MADAR SYSTEMS REPAIR PERSONNEL
(GRP220)

TASKS	PERCENT MEMBERS PERFORMING (N=147)
T567 REMOVE OR REPLACE MADAR SAR	100
T564 REMOVE OR REPLACE MADAR ODRU	100
T561 REMOVE OR REPLACE MADAR DRU	100
T560 REMOVE OR REPLACE MADAR SCU	100
T559 REMOVE OR REPLACE MADAR COMPUTERS	100
T563 REMOVE OR REPLACE MADAR MMUX	100
T553 ISOLATE MALFUNCTIONS TO MADAR SIGNAL ACQUISITION REMOTES (SAR)	99
T548 ISOLATE MALFUNCTIONS TO MADAR DATA RETRIEVAL UNITS (DRU)	99
T551 ISOLATE MALFUNCTIONS TO MADAR OSCILLOSCOPE AND DIGITAL READOUT UNITS (ODRU)	99
T566 REMOVE OR REPLACE MADAR RECORDING TAPES	99
T570 REPROGRAM MADAR COMPUTERS	99
T568 REMOVE OR REPLACE MADAR SCA UNITS, SUCH AS TEMPERATURE, PRESSURE, OR VIBRATION	99
T552 ISOLATE MALFUNCTIONS TO MADAR PRINTOUT UNITS (POU)	99
T565 REMOVE OR REPLACE MADAR POU	99
T562 REMOVE OR REPLACE MADAR MDR	99
T550 ISOLATE MALFUNCTIONS TO MADAR MANUAL MULTIPLEXER ADAPTER (MMUX)	98
T558 REMOVE OR REPLACE MADAR CMA	98
T549 ISOLATE MALFUNCTIONS TO MADAR MAINTENANCE DATA RECORDERS (MDR)	98
T554 ISOLATE MALFUNCTIONS TO MADAR SIGNAL-CONDITIONER AMPLIFIERS (SCA) SENSING UNITS (TEMPERATURE, PRESSURE, OR VIBRATION)	97
T546 ISOLATE MALFUNCTIONS TO MADAR COMPUTERS	97
T547 ISOLATE MALFUNCTIONS TO MADAR CONTROL AND SEQUENCE UNITS (CSU)	97
T556 ISOLATE MALFUNCTIONS TO MADAR SYSTEM CENTRAL MULTIPLEXER ADAPTER (CMA)	97
T569 REMOVE OR REPLACE MADAR SCM	97
T555 ISOLATE MALFUNCTIONS TO MADAR SIGNAL-CONDITIONING MULTIPLEXERS (SCM)	95
T557 OPERATE MADAR FOR SYSTEM INTERFACE CHECK-OUTS	93
J293 ISOLATE MALFUNCTIONS TO CONTROL DISPLAY UNITS (CDU) OR CONTROL INDICATOR UNITS (CIU)	93
J317 REMOVE OR REPLACE BATTERY UNITS (BU)	90
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	85
G200 OPERATE INERTIAL AND RADAR NAVIGATIONAL EQUIPMENT FOR CHECK-OUT OF ASSOCIATED AVIONIC SYSTEMS	84

TABLE A24
REPRESENTATIVE TASKS PERFORMED BY
ENROUTE MADAR SYSTEM REPAIR PERSONNEL
(GRP111)

TASKS	PERCENT MEMBERS PERFORMING (N=6)
F185 REFUEL OR DEFUEL AIRCRAFT	100
F179 OPERATE NON-POWERED AEROSPACE GROUND EQUIPMENT (AGE)	100
F178 LAUNCH OR RECOVER AIRCRAFT	100
F187 SERVICE AIRCRAFT WITH HYDRAULIC FLUID, AIR, OR OIL	100
F188 TOW AIRCRAFT	100
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	100
F172 ASSIST OTHER AVIONIC SPECIALISTS IN REPAIR OF OTHER AVIONIC SYSTEMS	100
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	100
J313 OPERATIONALLY CHECK INERTIAL SYSTEMS	100
J306 ISOLATE MALFUNCTIONS TO NAVIGATION UNITS (NU)	100
F181 OPERATE POWER AGE	83
F171 ASSIST IN REMOVING OR REPLACING AIRCRAFT MECHANICAL SYSTEMS	83
T570 REPROGRAM MADAR COMPUTERS	83
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	83
A22 SCHEDULE LEAVES, PASSES, OR TEMPORARY DUTY (TDY) TRIPS	83
F177 JACK AIRCRAFT	83
T553 ISOLATE MALFUNCTIONS TO MADAR SIGNAL ACQUISITION REMOTES (SAR)	83
B37 DRAFT CORRESPONDENCE	83
A23 SCHEDULE WORK ASSIGNMENTS	83
T567 REMOVE OR REPLACE MADAR SAR	83
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	83
T546 ISOLATE MALFUNCTIONS TO MADAR COMPUTERS	83
F175 INSTALL OR REMOVE 780 EQUIPMENT	67
B25 BRIEF PERSONNEL ON MAINTENANCE MANAGEMENT DIRECTIVES OR PROCEDURES	67
G206 REMOVE OR INSTALL ACCESS PANELS	67
A18 PREPARE DUTY ROSTERS	67
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	67
A3 COORDINATE WORK WITH OTHER SECTIONS	67
T557 OPERATE MADAR FOR SYSTEM INTERFACE CHECK-OUTS	67
D102 CONDUCT OJT	67
C78 INDORSE AIRMAN PERFORMANCE REPORTS	67
B49 INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	67

TABLE A25

REPRESENTATIVE TASKS PERFORMED BY
FLIGHTLINE MADAR SYSTEMS REPAIR PERSONNEL
(GRP262)

TASKS	PERCENT MEMBERS PERFORMING
U589 BENCH CHECK MADAR DRU	100
U592 BENCH CHECK MADAR ODRU	100
U588 BENCH CHECK MADAR SCU	100
U590 BENCH CHECK MADAR MDR	100
U608 PROGRAM MADAR COMPUTERS	100
U587 BENCH CHECK MADAR COMPUTERS	100
U593 BENCH CHECK MADAR POU	100
U591 BENCH CHECK MADAR MMUX	100
U584 ALIGN MADAR POU	100
U582 ALIGN MADAR MMUX	100
U577 ADJUST MADAR ODRU	100
U585 ALIGN MADAR SCM	100
U574 ADJUST MADAR DRU	100
U578 ALIGN MADAR CMA	100
U579 ALIGN MADAR CSU	100
U573 ADJUST MADAR SCU	100
U575 ADJUST MADAR MDR	100
U599 ISOLATE MALFUNCTIONS TO MADAR CSU SRU	88
U603 ISOLATE MALFUNCTIONS TO MADAR ODRU SRU	88
U605 ISOLATE MALFUNCTIONS TO MADAR SAR SRU	88
U601 ISOLATE MALFUNCTIONS TO MADAR MDR SUR	88
U604 ISOLATE MALFUNCTIONS TO MADAR POU SRU	88
U607 ISOLATE MALFUNCTIONS TO SCM SRU	75
U606 ISOLATE MALFUNCTIONS TO SCA SRU	63
E164 TAG OR LABEL EQUIPMENT	63
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	63
E148 MAKE ENTRIES ON AFTO FORMS 349 (MAINTENANCE DATA COLLECTION RECORD)	63
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	50
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	50
E151 MAKE ENTRIES ON SUPPLY FORMS, OTHER THAN AF FORM 601	50
B28 COUNSEL SUBORDINATE ON PERSONAL OR MILITARY-RELATED PROBLEMS	38
D102 CONDUCT OJT	38
B34 DIRECT SHOP MAINTENANCE ACTIVITIES	25
C66 EVALUATE COMPLIANCE WITH WORK STANDARDS	25
C59 ANALYZE WORK LOAD REQUIREMENTS	25
B55 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	25

TABLE A26

REPRESENTATIVE TASKS PERFORMED BY
ADMINISTRATIVE AND SUPERVISORY PERSONNEL
(GRP018)

TASKS		PERCENT MEMBERS PERFORMING (N=105)
A3	COORDINATE WORK WITH OTHER SECTIONS	85
B47	INDOCTRINATE NEWLY ASSIGNED PERSONNEL	80
B28	COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	76
B27	CONDUCT OR PARTICIPATE IN STAFF MEETINGS	75
B50	INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	74
B37	DRAFT CORRESPONDENCE	73
C91	PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	70
D119	MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	70
B25	BRIEF PERSONNEL ON MAINTENANCE MANAGEMENT DIRECTIVES OR PROCEDURES	70
C89	PREPARE AIRMAN PERFORMANCE REPORTS (APR)	68
B49	INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	68
C82	INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	65
A22	SCHEDULE LEAVES, PASSES, OR TEMPORARY DUTY (TDY) TRIPS	65
C66	EVALUATE COMPLIANCE WITH WORK STANDARDS	64
A13	ESTABLISH WORK PRIORITIES	64
C81	INSPECT CONSOLIDATED TOOL KITS (CTK)	62
C62	CONDUCT SAFETY INSPECTIONS	62
A23	SCHEDULE WORK ASSIGNMENTS	59
B48	INITIATE CORRECTIVE ACTIONS BASED ON MAINTENANCE INSPECTIONS OR REPORTS	59
A17	PREPARE BRIEFINGS	58
C87	PERFORM SAFETY INSPECTIONS	56
D113	EVALUATE PROGRESS OF TRAINEES	55
B55	SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	54
D106	COUNSEL TRAINEES ON TRAINING PROGRESS	53
C72	EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	52
D125	SELECT PERSONNEL TO ATTEND TRAINING PROGRAMS	52
B52	PRESENT BRIEFINGS	51
A7	DEVELOP RECORDS OR MAINTENANCE AND DISPOSITION FILES	51
B56	SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS TECHNICIANS (AFSC 32874)	50

TABLE A27

REPRESENTATIVE TASKS PERFORMED BY
SECTION CHIEFS AND SUPERVISORS
(GRP205)

TASKS	PERCENT MEMBERS PERFORMING (N=40)
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	100
B50 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	100
A18 PREPARE DUTY ROSTERS	100
A3 COORDINATE WORK WITH OTHER SECTIONS	100
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	100
A23 SCHEDULE WORK ASSIGNMENTS	97
A13 ESTABLISH WORK PRIORITIES	97
A25 BRIEF PERSONNEL ON MAINTENANCE MANAGEMENT DIRECTIVES OR PROCEDURES	97
D99 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	97
B49 INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	97
A22 SCHEDULE LEAVES, PASSES, OR TEMPORARY DUTY (TDY) TRIPS	97
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	95
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	95
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	95
C82 INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	92
B56 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS TECHNICIANS (AFSC 32874)	92
B48 INITIATE CORRECTIVE ACTIONS BASED ON MAINTENANCE INSPECTIONS OR REPORTS	92
C77 EVALUATE WORK SCHEDULES	90
B37 DRAFT CORRESPONDENCE	90
B27 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	90
B55 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	88
C66 EVALUATE COMPLIANCE WITH WORK STANDARDS	88
C78 INDORSE AIRMAN PERFORMANCE REPORTS	88
D125 SELECT PERSONNEL TO ATTEND TRAINING PROGRAMS	88
C71 EVALUATE MAINTENANCE DATA COLLECTION SYSTEM REPORTS	88
E143 MAINTAIN MAINTENANCE DATA COLLECTION (MDC) DAILY TRANSACTION ERROR LISTINGS	88
E161 REVIEW MDC DAILY TRANSACTION ERROR LISTING	88
D120 PLAN ON-THE-JOB TRAINING (OJT)	82

TABLE A28
REPRESENTATIVE TASKS PERFORMED BY
COURSE SUPERVISORS
(GRP152)

TASKS	PERCENT MEMBERS PERFORMING (N=8)
D119 MAINTAIN TRAINING RECORDS, CHARTS, GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	100
D125 SELECT PERSONNEL TO ATTEND TRAINING PROGRAMS	100
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	100
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	100
B49 INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	100
A22 SCHEDULE LEAVES, PASSES, OR TEMPORARY DUTY (TDY) TRIPS	100
D115 EVALUATE TRAINING PERFORMANCE	88
D112 EVALUATE INSTRUCTOR PERFORMANCE	88
D106 COUNSEL TRAINEES ON TRAINING PROGRESS	88
D113 EVALUATE PROGRESS OF TRAINEES	88
E166 TYPE CORRESPONDENCE, FORMS, OR REPORTS	88
D114 EVALUATE TRAINING METHODS, TECHNIQUES, OR PROGRAMS	88
D124 SCHEDULE TRAINING PROGRAMS OTHER THAN OJT	88
D110 DIRECT TRAINING COURSES	88
B37 DRAFT CORRESPONDENCE	88
B52 PRESENT BRIEFINGS	88
B50 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	88
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	88
A17 PREPARE BRIEFINGS	88
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	88
C82 INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	75
D109 DEVELOP COURSE CURRICULA, PLANS OF INSTRUCTION (POI), OR SPECIALTY TRAINING STANDARDS (STS)	75
D98 ADMINISTER OR SCORE TESTS	75
B27 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	75
D111 ESTABLISH TRAINING REQUIREMENTS	75
A18 PREPARE DUTY ROSTERS	75
A3 COORDINATE WORK WITH OTHER SECTIONS	75
D104 CONDUCT RESIDENT COURSE TRAINING	63
D121 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	63
B57 SUPERVISE CIVILIAN PERSONNEL OTHER THAN AIR RESERVE TECHNICIANS (ARTS)	50
D129 WRITE TEST QUESTIONS	50

TABLE A29

REPRESENTATIVE TASKS PERFORMED BY
FLIGHTLINE MADAR SUPERVISORS
(GRP118)

TASKS	PERCENT MEMBERS PERFORMING (N=27)
B55 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	100
B29 DIRECT FLIGHTLINE MAINTENANCE ACTIVITIES	100
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	100
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	100
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	100
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	100
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	100
F180 OPERATE OR SERVICE MAINTENANCE DISPATCH VEHICLES	86
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	86
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	86
D116 INSTRUCT PERSONNEL ON EQUIPMENT MAINTENANCE OR REPAIR TECHNIQUES	86
A3 COORDINATE WORK WITH OTHER SECTIONS	86
E149 MAKE ENTRIES ON AFTO FORMS 350 (REPARABLE ITEM PROCESSING TAG)	86
B53 SUPERVISE AIR RESERVE TECHNICIANS (ARTS)	71
B57 SUPERVISE CIVILIAN PERSONNEL OTHER THAN AIR RESERVE TECHNICIANS (ARTS)	71
A23 SCHEDULE WORK ASSIGNMENTS	71
D106 COUNSEL TRAINEES ON TRAINING PROGRESS	71
T571 TEACH MADAR TROUBLESHOOTING TECHNIQUES	71
C87 PERFORM SAFETY INSPECTIONS	71
G203 PERFORM PRODUCTION INSPECTIONS	71
C62 CONDUCT SAFETY INSPECTIONS	71
D107 DEMONSTRATE OPERATION OF EQUIPMENT	71
E136 LOCATE PARTS OR STOCK NUMBERS IN TECHNICAL PUBLICATIONS	71
C81 INSPECT CONSOLIDATED TOOL KITS (CTK)	71
B25 BRIEF PERSONNEL ON MAINTENANCE MANAGEMENT DIRECTIVES OR PROCEDURES	71
B56 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS TECHNICIANS (AFSC 32874)	57
D113 EVALUATE PROGRESS OF TRAINEES	57
A13 ESTABLISH WORK PRIORITIES	57
A18 PREPARE DUTY ROSTERS	57

TABLE A30
REPRESENTATIVE TASKS PERFORMED BY
OJT MANAGERS
(GRP085)

TASKS	PERCENT MEMBERS PERFORMING (N=5)
B47 INDOCTRINATE NEWLY ASSIGNED PERSONNEL	100
B50 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	100
D125 SELECT PERSONNEL TO ATTEND TRAINING PROGRAMS	100
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	100
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	80
C89 PREPARE AIRMAN PERFORMANCE REPORTS (APR)	80
D122 REVIEW TRAINING REPORTS	80
B56 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS TECHNICIANS (AFSC 32874)	80
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	80
D99 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	80
A3 COORDINATE WORK WITH OTHER SECTIONS	80
C78 INDORSE AIRMAN PERFORMANCE REPORTS	80
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	80
B37 DRAFT CORRESPONDENCE	60
D113 EVALUATE PROGRESS OF TRAINEES	60
B49 INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	60
D120 PLAN ON-THE-JOB TRAINING (OJT)	60
B58 SUPERVISE MILITARY PERSONNEL WITH AFSC OTHER THAN 328X4	60
B27 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	60
A22 SCHEDULE LEAVES, PASSES, OR TEMPORARY DUTY (TDY) TRIPS	60
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	60
D102 CONDUCT OJT	60
B55 SUPERVISE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32854)	60
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	60
D106 COUNSEL TRAINEES ON TRAINING PROGRESS	60
C82 INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	60
A18 PREPARE DUTY ROSTERS	60
C87 PERFORM SAFETY INSPECTIONS	40
D111 ESTABLISH TRAINING REQUIREMENTS	40
A7 DEVELOP RECORDS OR MAINTENANCE AND DISPOSITION FILES	40
C77 EVALUATE WORK SCHEDULES	40
D101 CONDUCT JOB PROFICIENCY TRAINING	40

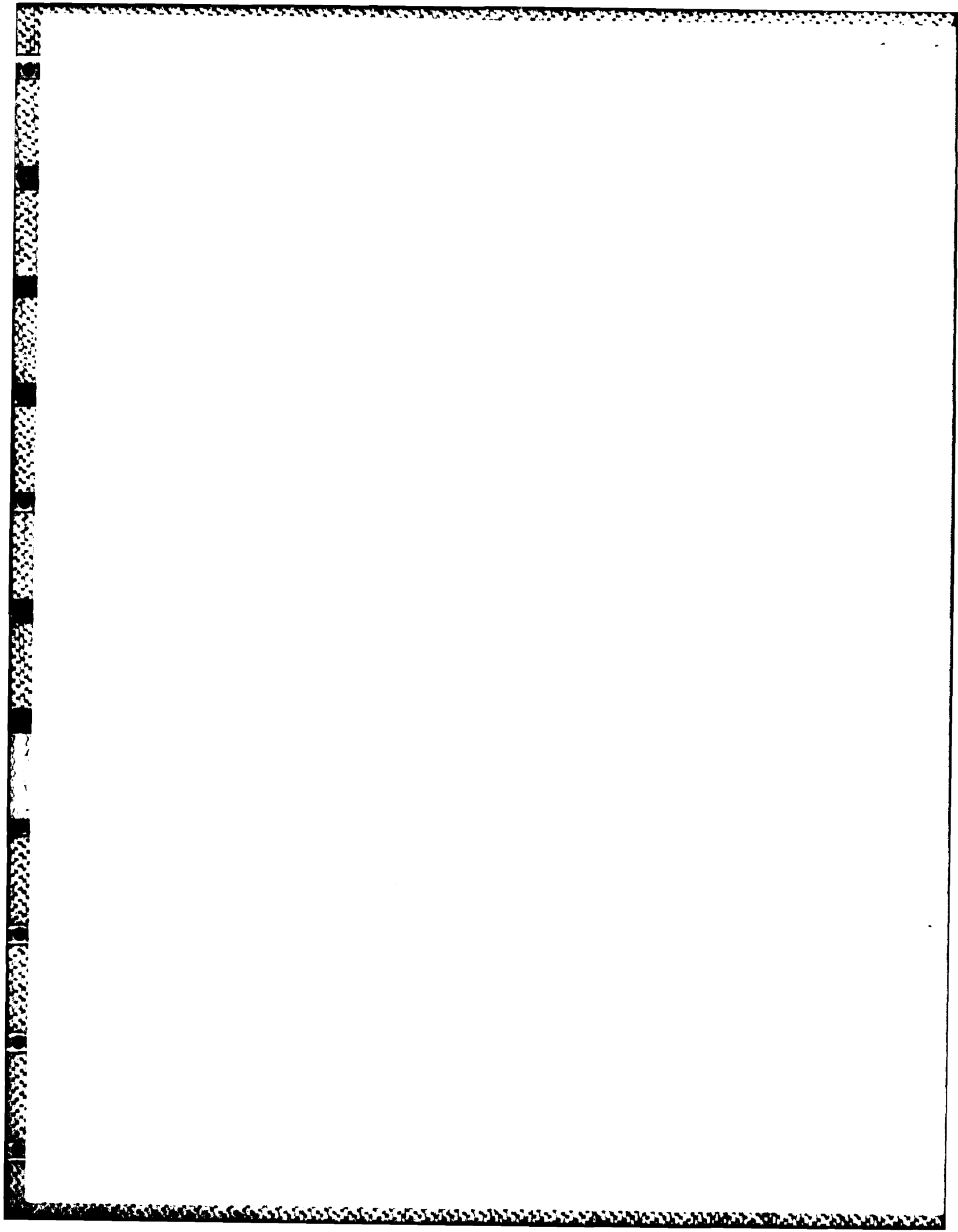
TABLE A31

REPRESENTATIVE TASKS PERFORMED BY
QUALITY CONTROL MANAGERS
(GRP047)

TASKS	PERCENT MEMBERS PERFORMING (N=20)
B37 DRAFT CORRESPONDENCE	85
C68 EVALUATE INSPECTION REPORTS OR PROCEDURES	85
C96 WRITE INSPECTION REPORTS	80
B27 CONDUCT OR PARTICIPATE IN STAFF MEETINGS	80
C66 EVALUATE COMPLIANCE WITH WORK STANDARDS	80
A3 COORDINATE WORK WITH OTHER SECTIONS	75
C62 CONDUCT SAFETY INSPECTIONS	75
C83 INSPECT MAINTENANCE ACTIVITIES	70
A17 PREPARE BRIEFINGS	70
C97 WRITE STAFF STUDIES, SURVEYS, OR SPECIAL REPORTS, OTHER THAN TRAINING REPORTS	65
C87 PERFORM SAFETY INSPECTIONS	65
C92 REVIEW TECHNICAL ORDERS (TOs)	65
C74 EVALUATE SAFETY OR SECURITY PROGRAMS	65
B25 BRIEF PERSONNEL ON MAINTENANCE MANAGEMENT DIRECTIVES OR PROCEDURES	65
G204 PERFORM QUALITY ASSURANCE CHECKS	60
B33 DIRECT OR IMPLEMENT QUALITY CONTROL PROGRAMS	60
C81 INSPECT CONSOLIDATED TOOL KITS (CTK)	60
A21 SCHEDULE INSPECTIONS	60
B52 PRESENT BRIEFINGS	60
B50 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	60
C82 INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	60
C85 INVESTIGATE ACCIDENTS OR INCIDENTS	60
C72 EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	55
C86 MAKE ENTRIES ON INSPECTION SYSTEM FORMS	55
E159 RESEARCH OR ANALYZE MAINTENANCE RECORDS OR REPORTS	55
C75 EVALUATE SUGGESTIONS	50
B48 INITIATE CORRECTIVE ACTIONS BASED ON MAINTENANCE INSPECTIONS OR REPORTS	50
C73 EVALUATE PROCEDURES FOR STORAGE, INVENTORY, OR INSPECTION OF PROPERTY ITEMS	50
C67 EVALUATE ENGINEERING CHANGE PROPOSALS	45
C95 TEST OR EVALUATE NEW OR MODIFIED EQUIPMENT	45
C63 EVALUATE ADMINISTRATIVE FORMS, FILES, OR PROCEDURES	45
G201 PERFORM ON-EQUIPMENT QUALITY VERIFICATIONS	40

TABLE A32
REPRESENTATIVE TASKS PERFORMED BY
TRAINING PERSONNEL
(GRP008)

TASKS	PERCENT MEMBERS PERFORMING (N=38)
D98 ADMINISTER OR SCORE TESTS	87
D107 DEMONSTRATE OPERATION OF EQUIPMENT	87
D113 EVALUATE PROGRESS OF TRAINEES	84
D106 COUNSEL TRAINEES ON TRAINING PROGRESS	82
D108 DEMONSTRATE PROCEDURES FOR LOCATING TECHNICAL INFORMATION	76
D129 WRITE TEST QUESTIONS	76
D104 CONDUCT RESIDENT COURSE TRAINING	74
D116 INSTRUCT PERSONNEL ON EQUIPMENT MAINTENANCE OR REPAIR TECHNIQUES	71
B28 COUNSEL SUBORDINATES ON PERSONAL OR MILITARY-RELATED PROBLEMS	61
D109 DEVELOP COURSE CURRICULA, PLANS OF INSTRUCTION, OR SPECIALTY TRAINING STANDARDS (STS)	55
D103 CONDUCT REMEDIAL TRAINING	45
D121 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	45
D115 EVALUATE TRAINING PERFORMANCE	34
C91 PROVIDE TECHNICAL ASSISTANCE FOR JOB-RELATED PROBLEMS ENCOUNTERED BY SUBORDINATES	32
D114 EVALUATE TRAINING METHODS, TECHNIQUES, OR PROGRAMS	32
B49 INITIATE PUNITIVE ACTIONS OR RECOGNITION FOR COMMENDABLE PERFORMANCES	29
D119 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS, SUCH AS AF FORMS 623 (ON-THE-JOB TRAINING RECORD)	24
E166 TYPE CORRESPONDENCE, FORMS, OR REPORTS	24
D118 MAINTAIN TRAINING EQUIPMENT	21
D117 MAINTAIN STUDY REFERENCE FILES	21
A10 ESTABLISH PERFORMANCE STANDARDS	21
B44 IMPLEMENT SAFETY PROGRAMS OR PROCEDURES	18
B54 SUPERVISE APPRENTICE AVIONIC INERTIAL AND RADAR NAVIGATION SYSTEMS SPECIALISTS (AFSC 32834)	16
D110 DIRECT TRAINING COURSES	16
B52 PRESENT BRIEFINGS	16
C82 INSPECT FACILITIES OR WORK AREAS FOR CONDITION OR APPEARANCE	16
A3 COORDINATE WORK WITH OTHER SECTIONS	16
D122 REVIEW TRAINING REPORTS	13
D125 SELECT PERSONNEL TO ATTEND TRAINING PROGRAMS	5
D124 SCHEDULE TRAINING PROGRAMS OTHER THAN OJT	5
D128 WRITE OR REVISE CAREER DEVELOPMENT COURSES	3



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